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THE

# OPHTHALMIC RECORD

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The March number of the OPTHALMIC RECORD will contain a report of the proceedings of the Western Ophthalmologic and Otolaryngologic Association. An original article by Warwick M. Cowgill, M.D., Embolism of Lower Branch of Central Retinal Artery; one by R. Denig, M.D., on the Histology and Etiology of Posterior Lenticulus; one by E. C. Ellett, M.D., Series of Cases of Malarial Keratitis, with Reports of Blood Examinations; one by Cassius D. Wescott, M.D., Some Experiences with Dr. Gould's Method of Prismatic Exercises. There will also appear reviews of the most recent contributions to Ophthalmology, editorials, society reports and miscellaneous items of interest.

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The RECORD particularly desires short practical papers on any subject connected with Ophthalmology. These will be published at as early a date as possible. It is understood that, unless otherwise arranged, original articles when accepted are contributed to the RECORD exclusively. Illustrative cuts will be made at the expense of the journal, and proofs for correction will be sent to authors when desired. Reprints with covers are furnished at cost. One hundred of these will be presented to authors *gratis* when a request for them is written on the original manuscript. The RECORD will be issued monthly, and each number will contain about 54 pages of reading matter.

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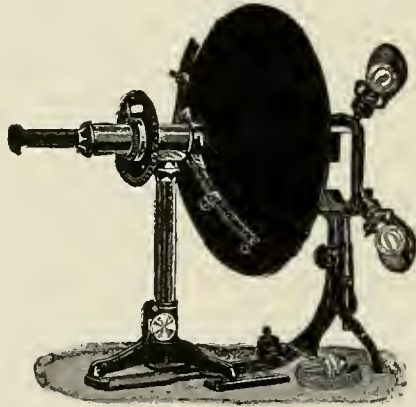
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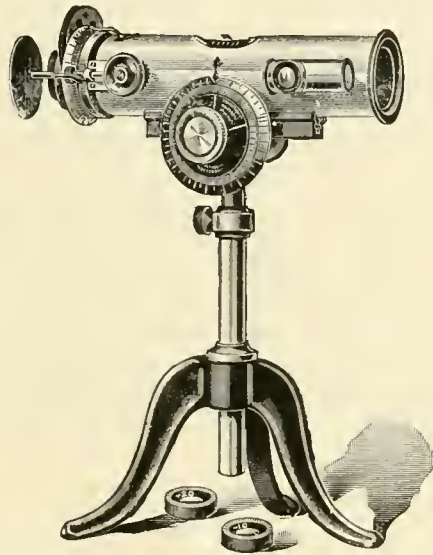
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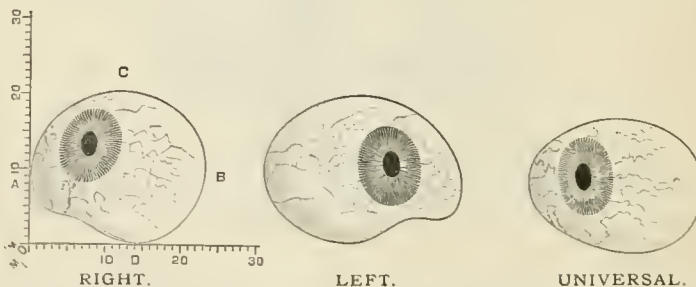
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# THE OPHTHALMIC RECORD

*A MONTHLY REVIEW OF THE PROGRESS OF  
OPHTHALMOLOGY.*

VOLUME VIII.

CHICAGO, FEBRUARY, 1899.

NO. 2. NEW SERIES

## ORIGINAL ARTICLES.

### BLINDNESS FOLLOWING THE INTOXICATING USE OF JAMAICA GINGER—REPORT OF SIX CASES.\*

BY HIRAM WOODS, JR., M.D.

BALTIMORE, MD.

Illustrated.

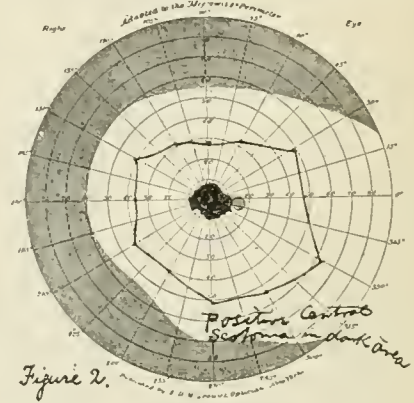
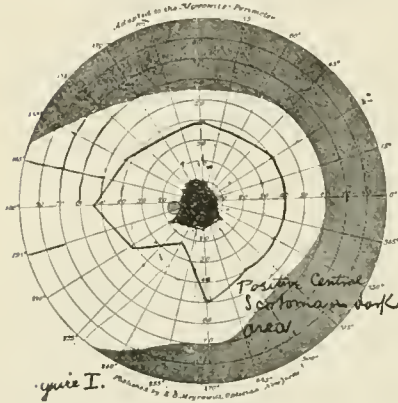
So far as I know, the only recorded case of toxic amblyopia thought to be due to Jamaica ginger is published in the OPTHALMIC RECORD for November, 1897, by Archibald G. Thomson of Philadelphia. It has been my fortune to see four such cases, and, through the courtesy of personal friends, I have notes of two others. These six are appended.

Case 1. The patient applied for treatment at the Dispensary of the Johns Hopkins Hospital, and for notes I am indebted to my friends Drs. William Osler, Henry M. Thomas and Samuel Theobald.

John H., 32 years old, bricklayer by trade and sometimes oyster dredger, was seen January 27th, 1898. The following is copied from the blank used in the Dispensary: "He had always been well as a boy; no disease except measles; denies gonorrhœa and syphilis, but admits exposure; slight rheumatism in legs during last year; used to go on an occasional spree, but does not drink now; tobacco, five cents' worth a week. In December, 1896, he was on an oyster boat down the Bay. He fell in with a lot of men who were drinking Jamaica ginger, mixing it with cider. It was Christmas week, and he drank for five or six days. When the cider gave out they mixed the ginger with water. Patient said that he had heard that it was a common thing for men on the eastern

\*Read December 15, 1898, before the Baltimore Ophthalmological and Otological Society.

shore, about Oxford, to lose their sight after drinking Jamaica ginger for several months. Personally he had known of but one case, which recovered. The first trouble noted with vision was that oyster shells, as they dropped into the water, looked like drops of blood. Next morning he could not see a match held in front of him, but could distinguish large objects. He now became totally blind, and remained so for four days. Then sight gradually came back, and in four weeks he was able to read. At this time he spent six weeks at the Marine Hospital. Two weeks after leaving the hospital he had a second attack, since which vision has been growing gradually worse." The report of the ophthalmoscopic examination, made by Dr. Mills, is: "Gray atrophy of both optic nerves.



Pupils react very sluggishly to light and freely upon accommodation." His fields are also given (Figs. 1 and 2). A note on the perimetric chart says: "No vision in shaded portion. Can see moving object 10° to 15° outside of field marked, which is for stationary disc." There is no record of either visual acuity, or ability, if he had it, to recognize colors.

Quoting further from Dr. Thomas' notes in the Neurological Department, I do not find mention of the amount of ginger the patient took. On January 27th there is this: "Pupils are contracting and dilating all the time. He has sharp, shooting pains in legs, mostly about knees. They come and go very suddenly. They are worse in bad weather, and have persisted about a year. Frequently has sharp pains in stomach. No bladder trouble. No difficulty in walking till last night, when he noticed he was staggering as if drunk. Knee jerks seem about normal. Romberg symptom not given." The patient was put upon 1/32 grain sulphate strychnia four times daily. On February 5th Dr. Thomas notes:



"Distinguishes bright colors with left eye fairly well." The colors used are not specified. On February 7th: "To-day reflexes very active; good appetite, sleeps well, and does not drink. Smokes only two ounces of tobacco a week. Condition of eyes about the same. He cannot see to read even the headings of a newspaper, nor distinguish faces unless very close. He cannot then see all face at once. Vision is best at periphery, and to see best he has to look sideways. Pupils react actively to both light and accommodation. Gray atrophy of both nerves; no cupping of discs." The last note is dated March 21st, and is: "No improvement in vision. Reflexes active." It is evident that Dr. Thomas excluded commencing tabes. The occasional lancinating pains seem the only general symptom, while of the eye symptoms the constant alternating contraction and dilatation of the pupils noted but once—January 27th—is suggestive of the nuclear irritation preceding pupillary rigidity. Knies ("The Eye in General Diseases") quotes a case of Uhthoff in which this existed. I am inclined to think this one observation of little account in reaching a diagnosis. There seems no doubt that there occurred in December, 1896, after the ginger spree, an acute optic neuritis, causing at first total blindness, which recovered, as such cases usually do (Fuchs Text Book), later relapsed, and finally resulted in atrophy of the macular and peripheral fibers. The case bears a striking resemblance to Thomson's.

Case 2 occurred in the private practice of my friend and hospital associate, Dr. Francis M. Chisolm. Dr. C. has kindly written for me notes from his case-book, which I insert in full, with points obtained in conversation:

"November 8, 1898. I. S., age 47, occupation stock herder. The sight of both eyes has been bad since February. Everything looks smoky and indistinct. Before that time his sight had been good. The trouble began after getting up one morning, when he had a severe attack of nausea and vomiting with sharp pains in his head; sudden blindness came on during this attack. Since that time his sight had gradually improved to a certain point, after which no further improvement or deterioration has taken place.

"The patient admitted that he smoked a great deal, drank occasionally but not to excess. There was no specific history. His physician, who came with him, said, however, that the patient had always been a heavy drinker and smoker, to such an extent that if he could not get whiskey he would drink anything that had alcohol in it; that he had been drinking ginger with cider during the last three years. That for three weeks

previous to the attack of nausea he had been on a continued spree and the day before the attack, had drunk three or four half pint bottles of ginger essence, besides a quantity of whiskey and anything else that came to hand. He was likewise smoking continuously.

"Examination: V = counting fingers at about six inches distance, which is done by the upper field as he directs his eyes upward at an angle of about  $30^{\circ}$  from the horizontal. There is chronic inflammation of the conjunctiva both ocular and palpebral. The corneæ are clear. Anterior chamber normal; pupils normal size and respond readily to light. Has fair convergence and accommodation reflex. Lens and media clear, and discs slightly pallid, with contracted furred edges, especially left. Arteries shrunken in caliber; veins normal; fundus otherwise normal. The left eye shows the changes a little more marked than the right, but in neither is the pathologic picture what one would expect to find with so much impairment of sight after for so long a time. It was difficult to get any information about his color sense. His field for white was very uncertain but the accompanying charts give about the range. Reflex at patella abolished. No ankle clonus. On standing with feet close together there is some wavering but no inclination to fall.

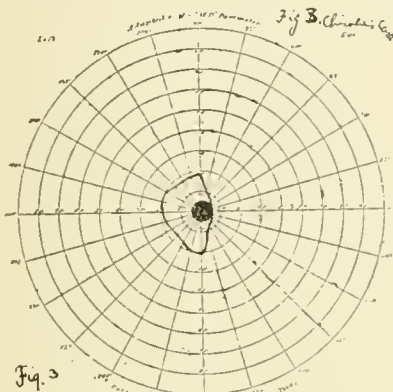
"The patient states that the last few months he has been troubled much with indigestion, and that although usually strong, at times his muscular system seems to give way completely, leaving him almost collapsed.

"Hearing is about 45/60, more acute in the left ear than in the right. Although a heavy drinker he would go sometimes weeks without touching a drop."

Dr. Chisolm tells me that the only definite thing about the man's color sense was inability to recognize red; that perimetric examination was difficult on account of persistency in looking upward or toward the disc; that there was but one examination. He is sure, however, that, so far as one examination can prove it, there was no vision in either nasal field.

The relative, negative scotoma, which doubtless existed, was possibly due to tobacco or to this agent combined with alcohol. The loss of patella reflex and the unsteadiness in standing with closed eyes, are, at least, suggestive of lesion in the central nervous system. So is the bi-nasal hemianopsia. It is to be remembered that the man was unconscious of defective sight until after the ginger drunk in February. The symptoms immediately following this are strikingly like those in the cases which I saw; headache, nausea, total blindness, slow recovery with permanent field defects and scotomata, or permanent blindness. It looks

as though there was a retro-bulbar neuritis after the ginger intoxication, engrafted, possibly, on a tobacco amblyopia. This seems as far as we can go with certainty. The general symptoms of lesion of the central nervous system are indefinite, and the possibility of bi-nasal blindness, of which the patient was unconscious, is questionable. I have never seen a case of *bi-nasal* hemianopsia; but I have seen three cases where this condition existed in one eye. The persons were definitely conscious of the defect. I think, too, that the contraction of the infero-nasal field in chronic glaucoma is usually felt. That this very rare form of blindness has existed in Dr. Chisolm's patient only since February seems probable; and yet, in view of the rarity of the affection and difficulties in examina-



tion, it is a matter of regret that there was but one field test. Field charts are given. (Figs. 3 and 4.)

The next four cases came under my personal observation.

CASE 3.—This was the first case I saw, and I think the first patient in this State in whom a causative relation between ingestion of ginger and blindness was suspected.

John K., 38 years of age, workman in a flour mill in Cecil County, was brought to my office March 6, 1897, by Dr. Samuel T. Roman of Conowingo. K. is a married man, and has two healthy children. His early history is unimportant. Ten years ago he had gonorrhœa; but all traces long since vanished. On Saturday, February 6th, he had worked in the mill, with others, carrying property to a place secure from a threatening flood. He wore hip gum boots, and said he was "wet only from perspiration." This work lasted till three o'clock Sunday morning. Once during the night he turned the drafts on the stove in the mill,

and while lying on the floor, with head toward the stove, fell asleep. He awoke in a half hour and immediately resumed work on the flooded lower floor. He attributed his troubles to taking cold during this nap. Went home and to bed about three A. M. Sunday. Slept till eight, and remained home all day, taking a walk in the country during the afternoon. He "felt tired," but nothing more. After a good sleep Sunday night, he resumed work Monday. In the morning he cleaned away drift ice, and worked in the mill during the afternoon. Twice he took a paper to read, and fell asleep almost at once. He was awakened Monday night by nausea. There were several attacks of vomiting, and diarrhœa, with gastro-intestinal cramps and severe headache. During the last of these vomiting spells, as he recalled, "sight went quick as a flash." In a few minutes it returned, disappeared, and in this condition he said he "became unconscious." He awoke Tuesday morning, totally blind, and was told that he had been unconscious, that he could not be roused, and that Dr. Rowland was at his bedside. Dr. Roman told me that he was called in consultation the same afternoon, and confirmed this history. Dr. R. said, further, that there was slight elevation of temperature, rapid pulse, sputum tinged with blood, while the conjunctivæ were injected, pupils widely dilated and inactive to light, and man totally blind. Blindness persisted ten days. Then there came periods of vision, when he would see objects and persons, alternating with spells of total blindness. The latter soon became "only instantaneous." Improvement had continued to the degree present when I saw him. For two or three years K. had gone on occasional sprees. He said these were no more frequent than every four or five weeks, and occupied Saturday night. He was generally drunk by bedtime. Very seldom had he drunk during the week or on Sunday. The beer or whiskey, brought illegally into the county, was consumed, as a rule, Saturday. If any were left over, Sunday morning was devoted to its disposal. When beer and whiskey were not obtainable alcohol, diluted with water, was used. Once, two years previous, he and a companion had drank a pint of Jamaica ginger. Beyond intoxication, they had felt no effects. Ginger, he said, was commonly used for this purpose, and he had heard of a man, now dead, who had been temporarily blind after a ginger spree. K. was a pipe smoker, usually three, and sometimes ten pipes a day being his allowance. Prior to February 6, 1897, he had not drank anything at all for four weeks. During the Saturday night in the mill he drank ginger, pouring it from a large bottle, and adding water. So did the other workmen. Four or five ounces he is sure would cover the amount he drank. He took one drink of alcohol.

This was about a half ounce. He was positive that there was but one drink apiece of alcohol, for the quantity on hand was small. Ginger was also drunk Sunday. It is impossible to say how much: but something less than a pint altogether with the half ounce of alcohol, seems a generous allowance for the whole spree. Examination of heart and urine was negative.

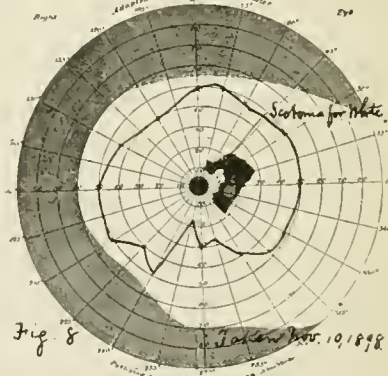
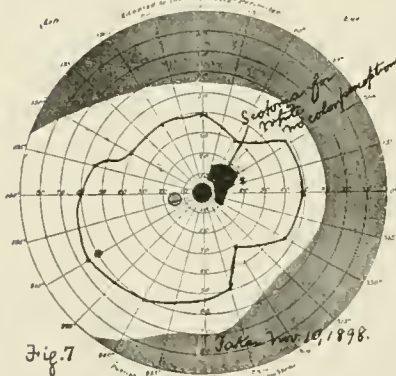
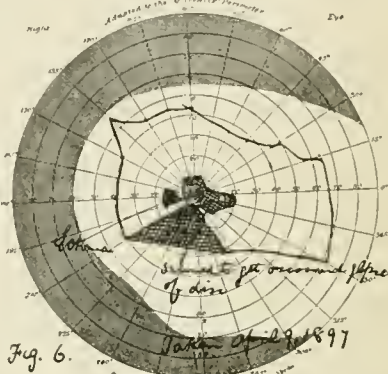
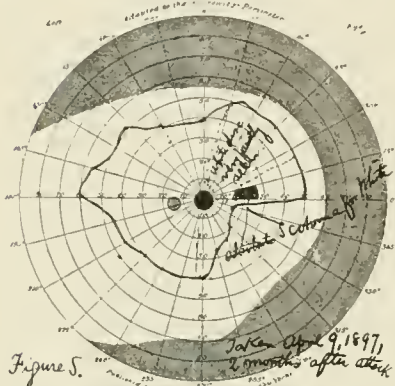
My case-book notes concerning his condition March 6, 1897, are: "Gets about with difficulty. Pupils widely dilated, no response to daylight, feeble to reflected or oblique illumination. Left slightly more active. Respond to A. Tn. No external injection, or impairment of motion. Media clear, nerves possibly a little pallid, no alteration of retinal vessels. Slight haziness at outer border left papilla. Functional test: Vision about 3/200 each eye. Fingers, held, directly in front, are counted at 3' by the left, 2" by right eye. He loses fingers on motion either way, and in counting seems to see only one at a time; 19 Jaeg. deciphered by left eye. Doubtful recognition of colors, central fixation. Are lost as soon as seen. Impossible to secure fields, though he seems to see a little better toward the left." The man was put on rapidly increasing doses of KI. I next saw him April 9, 1897. Vision for letters was unchanged. Fingers were uncertainly counted at 10' by left, 20" by right eye. No colors were recognized. K. came to my office at my request, November 10, 1898. Central vision is unaltered, and color recognition is lost. Jaeg. 12 is picked out with left eye. He spoke during perimetric examination of fading of disc, and said it was like a "confusion of sight" he now and then experiences. He says he is better, and does mill work without much trouble. This is due to improvement in the fields. There is atrophy of the papillo-macular fibers, well marked, and the rest of the papilla has not changed in appearance.

The fields of vision were obtained April 9, 1897, and November 10, 1898. They are given in Figs. 5, 6, 7 and 8. Figs. 5 and 6 show contraction for form, with rather sharp reëntering angles in each infero-nasal field. In left eye this borders on a small positive scotoma, to the nasal side of the fovea. Above the scotoma there is an area of faint sight. In Fig. 6 (r. e.) the reëntering angle unites with a central scotoma, extending outward to, and including, the normal blind spot. There was a second small nasal paracentral scotoma. Color vision was lost. In November, 1898, the following changes were observed: (Figs 7 and 8.) There is less contraction, with special improvement in the infero-nasal fields. The small nasal scotoma in the left eye (Fig. 7) has cleared a little at its nasal end, while it has broken through into the faint area toward the fovea. The



faint perception in upper nasal field has cleared. In right eye (Fig. 8) the fovea has regained vision, the small nasal scotoma has disappeared, while that in temporal field has enlarged.

CASE 4.—James C., age 56, of Howard County, Md., shoemaker by trade, and, for a year prior to June, 1897, mail carrier in his district, was



sent to the Presbyterian Eye and Ear Hospital on Thursday, June 23, 1898, by Dr. J. W. Hebb. C. was entered in the service of my friend, Dr. Herbert Harlan, who kindly permits me to report the case. C. had always had good health, and worked steadily at his trade. The only illnesses in his history were a railroad accident in 1875, injuring his head, and a slight sunstroke the same summer. No permanent ill effects were experienced. He denied syphilis, and there was no evidence of the

disease. His hearing, for years somewhat defective, he thinks has been worse since June. On November 3 it was: for watch R. ear  $\frac{c}{48}$ , left ear  $\frac{7}{48}$ . Low forks were heard readily, aerial conduction exceeding bone. Aerial conduction for high forks was somewhat lessened, but beyond these suggestive evidences there was no proof of labyrinthine trouble. For ten years or more C. has been in the habit of going on sprees. Neither he nor his son thought this was more frequent than two or three times a year. When it was difficult to obtain liquor, it was not uncommon in his locality to drink ginger. It was also used to "taper off" after a spree. He had not used it extensively in either way, and had never known of any harm from it. He obtained about a pint of whiskey on Friday, 10th of June, and drank it by Sunday the 12th. The next day he bought four bottles of Jamaica ginger at a country store. From the maker of this particular ginger, I learn that each bottle contains a little over one and a half ounces. During the three days (to Thursday the 16th) he drank this six ounces or so. He was over his spree, and, though feeling below his usual condition, resumed work. On Saturday, the 18th, forty-eight hours after he had drunk ginger, and five days after touching whiskey, while weeding an onion patch, he suddenly was seized with giddiness, and "a cloud came over his vision." He was soon attacked with gastro-intestinal pains, vomiting and headache. The clouding of vision seemed to clear for a while. He sat a little time under a tree, and then walked into the house. Sight was extremely dim, the headache and nausea continued. He slept poorly that night on account of headache and intestinal pains. The next morning he was totally blind. When we saw him on the 23d the pupils were widely dilated and inactive. Light perception was doubtful. Ophthalmoscopic appearances were absolutely negative. He was put on pilocarpin, and later strychnia, without benefit. A month later light perception was lost. Beginning atrophy was evident. I examined the man at my office on November 3d. Both nerves are atrophied. Otherwise the fundus is normal. Pupils are widely dilated and inactive. For a month after he was taken ill he had occasional glimpses of sight, but these became only momentary, and finally ceased. Urinalysis failed to show any abnormality. It may be added that tobacco was used very sparingly.

CASE 5.—G. A. B., age 32, a practicing physician and resident of Maryland, was admitted to the Maryland University Hospital on Friday, July 29, 1898. The record says that when he entered he "could see slightly with the left eye." He had no l. p. in either eye when I saw him Saturday, 30th. The following history is made from notes taken at the hospital,

and conversations held with B. by Dr. Harlan, in whose care I left the man during August, and myself. Both Dr. H. and I have known B. for a number of years, Dr. H. being pretty familiar with his career. Drink has been his curse. His remark to the hospital attendant that he "got drunk whenever he came to town or had a chance," is, I believe, literally true. His present troubles began on Tuesday, July 19th. While not, I think, of great importance, it is as well to say that while oystering on July 3d he was overcome with heat, from which he thoroughly recovered. On the 19th he began drinking, and drank three pints of whiskey by the 22d. He then concluded to taper off on ginger, cinnamon, etc. Between the 22d and 27th he drank six or seven bottles of ginger and some "cinnamon," but no whiskey. He could not get it. On Wednesday, 27th, he says he felt "about as usual." He went to a baseball game, and drank seven bottles of ginger between two and four o'clock. Later he attended a ball. Oysters, ice cream, and possibly other refreshments, were partaken of. The next day, he said, he stayed in bed. He was not sick, but felt indisposed to move around. During Thursday night he was seized with atrocious headache, vomiting, and gastro-intestinal pains. These continued all night, till he fell asleep, toward morning. On awakening Friday morning he was totally blind. He started for Baltimore that day. Part of his trip was made in a canoe. He started from home blind. He said he saw the rigging in the canoe, men, etc., and walked alone into the hospital. He was totally blind, as said, when I saw him the afternoon of the 30th. There was, possibly, a low grade of neuritis. The veins were a little engorged, and the papilla presented the appearance of haziness not infrequently seen in uncorrected ametropia. The student's record on the day of entrance, so far as it refers to vision, is: "Faint perception of objects in temporal field. Able to distinguish objects with left eye, and to count fingers, not in the center of vision, but to the left." He was given a purge and pilocarpin. Later strychnia was administered. On the 31st I found he had l.p. and some reaction of pupils to light. I left town on August 1st. L. p. was lost on the 1st of August. On the 2d he saw light, and on the 4th discerned persons moving about the ward. These variations from blindness to useful vision continued while he was in the hospital to August 8th. His urine, examined in the hospital, had a sp. gr. 1020, acid reaction, traces of albumin, hyaline and granular casts. August 9th he saw Dr. Harlan, who found r. e. l. p. only, l. e. nothing. "Discs were choked, and vessels, particularly veins, congested." Dr. H. renewed the pilocarpin. B. had been taking strychnia. On the 19th he counted fingers each eye at a few inches. On the 26th he

made out large objects some feet away; saw a chair, and walked to it. Dr. Harlan's last notes are dated September 16th and 28th. On the 16th they are: "Getting worse. L. p., only each eye. On 28th, "No light, discs becoming clearly atrophic." I saw him on the 16th and 28th September. He told me that a few days previous he had seen persons walking about at a distance of twenty feet or more. There was no l. p. either eye. Again on the 28th he claimed he could see a cane I held before him. There was no l. p. either eye, nor pupil reaction. At Harlan's office a few minutes later, there was the same failure to see light. Both nerves are atrophied.

It is interesting to note that this man was positive that strychnia always damaged his sight, and that pilocarpin temporarily helped him.

CASE 6.—R. T., 52 years of age, was admitted to the Maryland University Hospital, August 20, 1898. He was totally blind. I was away at the time, and the following history is collated, from hospital notes, conversations with the patient, and a letter from Dr. Fazenbaker of Swanton, who first saw him after loss of sight. T. is a robust man, and has for many years been working in the repair department of the Baltimore & Ohio Railroad at Swanton, Md. He is a father of ten children. Has never been seriously ill. Chronic constipation seems to have been his one ailment. Dr. F. writes that he has known the man for two years, and from his own observation and information from reliable sources, says he is, and for twenty-five years has been, a periodical drinker. "He will drink anything that will intoxicate: Bateman's drops, Jamiaca ginger, lightning hot drops, essence of peppermint, essence of cinnamon, etc." These are articles named by Dr. F. as commonly sold substitutes for liquor in Garrett County. Dr. F. first saw T. professionally Thursday, August 4th. He learned that he had been "staggering drunk" for a week prior to this. T., on the other hand, assured me that until the afternoon of Saturday, July 30th, he had drunk nothing since Christmas, 1897. On this Saturday afternoon, when returning from work, he began drinking peppermint and ginger in a store. He seems to have bought twelve or fifteen bottles of the two, ginger predominating. Ten of these were drunk Saturday, and two or three Sunday morning. The others were broken. Each bottle apparently held about two oz., so the amount consumed may be approximately calculated as twenty to twenty-five oz. Dr. F. writes that T. is an enormous eater during his sprees, and that this spree was no exception. He has also been an inveterate pipe smoker of strong tobacco, T. gave me an indefinite history of an eye trouble several years back, apparently catarrhal conjunctivitis. While little reliance is to be placed on



his statements, there is no evidence that sight was in any degree impaired before this attack. He did his regular work, read the paper, etc. T. slept nearly all day Sunday and during the night. Soon after awaking Monday morning he was seized with nausea, gastric pain, and headache. This continued most of Monday. Attention was first called to his eyes, he told me, by their "paining if he touched or moved them." He noticed "spells of dimness" during the afternoon. He fell asleep sometime early Monday night, without, he said, taking either medicine or more intoxicant. When he awoke Tuesday morning vision was very dim, and soon he lost sight entirely. Barring his blindness, he felt well. He claims to have stayed at home from this Tuesday to Thursday, when he sent for Dr. F. He drank nothing these three days, and was totally without vision. Dr. F. so found him Thursday, with widely dilated pupils. As a purgative T. was given a half pound of Rochelle salts. Dr. F. says that all was taken before an action was obtained, and that T. told him such doses were common things with him. Strychnia constituted the active part of his future treatment. He stayed at home three weeks, when Dr. Henry McComas, of Oakland, one of the railroad surgeons, sent him to the University Hospital. T. claimed that during these three weeks he now and then saw a little. On admission to the hospital, my assistant, Dr. Edward E. Gibbons, found a low grade of neuritis, with probably commencing atrophy. He put the patient on pilocarpin. When I saw T. on the 30th of August both nerves were atrophic, while haziness about the edges indicated slight papillitis. He stayed in the hospital till September 28th. During this time he showed momentary evidences of sight on several occasions. Once he saw, or so claimed, the white apron of the nurse on the right side of his bed. Only once was I able to evoke light perception. He pointed to a candle on his right side, the left eye being closed, lost it when moved into another field, and saw it when brought back. When he left both nerves were atrophic, and he was without light perception. Pilocarpin, and later strychnia were pushed to physiological effect without benefit.

Dr. McComas has tried to procure me some of the ginger, peppermint, etc., sold at the shop where T. obtained it. His messenger was known to the proprietor and sale refused. Dr. Fazenbaker wrote me he would send a bottle if he could get it. This is three weeks ago, and apparently his efforts have been equally futile. Dr. F. writes that though the intoxicating use of such things as previously mentioned is common, neither he nor any physician in the neighborhood has seen a similar case.

In studying these cases with reference to the lesion present and its



cause, Thomson's case can be advantageously added. They may be regarded (1) with reference to their history and previous condition. All of the seven, except Chisolm's patient, were periodical drinkers. He was addicted to speers in addition to the daily moderate use of stimulants. In only two (cases 2 and 6) was tobacco used immoderately. In but one (5) was there systemic trouble (albuminuria with casts) to which blindness could be attributed even indirectly. The manner of its appearance was entirely unlike the usual ocular manifestations of chronic Bright's. In only one (Chisolm's) was there reason to suspect a previous toxic amblyopia. It seems safe to conclude that in none of the seven were there conditions apt to produce such effects as followed the ingestion of the ginger. The cases may be further studied from the standpoint of intoxicants employed. Jamaica ginger only was used in Thomson's and Case 1. Case 6 drank ginger and other substitutes for liquor. A half ounce of alcohol was the sole intoxicant besides ginger used by Case 3. Cases 4 and 5 had drank liquor five and seven days respectively before the onset of eye symptoms, had been over its intoxicating effects several days, and had imbibed freely of ginger only and of ginger and other adulterated drinks, just before blindness came. Case 2 drank whiskey and ginger indiscriminately to the last. It is seen that ginger is the only intoxicant used by all; that, barring the half ounce of alcohol in Case 5 (which probably had little influence) and the whiskey used by Chisolm's patient, ginger and other adulterated alcoholic drinks were the only agents used in immediate connection with the appearance of blindness. A third point of interest is the mode of onset. Save in one case (1), the first evidences of trouble were gastric pain, nausea, headache, twelve to forty-eight hours after ingestion of ginger. Then came dimness of vision, rapidly followed by total blindness.

Regarding the nature of the lesion, Thomson thinks it is an acute retrobulbar neuritis. Attributing, as he does, the whole picture to alcohol, he blames the dimness of vision on the first day to an alcoholic "central scotoma, negative in character, for color, not form." He attributes the increasing blindness to rapidly increasing pressure on axis cylinders, improvement after several days to absorption of the effusion, the macular bundle remaining more seriously affected on account of its deep situation in the nerve, and consequent exposure to greater pressure. The permanent central blindness he attributes to consecutive atrophy of the macular fibers. In two of my cases, both of which went on to complete atrophy, the neuritis was far enough forward to show as a papillitis.

Symptoms of acute retrobulbar neuritis, as given by authors, corre-

spond closely to observations made in all these cases. Fuchs (Text-book of Ophthalmology) says: "The *acute* form of retrobulbar neuritis is characterized by the suddenness with which the disturbance of vision develops. Within a few days all perception of light may be abolished. Externally—at most the pupil is dilated. These symptoms are often accompanied by violent headache, or by dull pain in the orbit, the latter being aggravated if the patient moves his eye or if the attempt is made to push it back in the orbit. The disease usually goes on to a complete or partial cure. In the first case the sight becomes normal again, in the second case a central scotoma generally remains." These symptoms are practically the same as given by Noyes, Swanzy, and others. An interesting symptom not quoted, but noted in these cases, was the occasional sudden returns of vision, soon disappearing.

The etiology of the retrobulbar neuritis in the cases narrated is not, to me at least, clear. Fuchs says the "known causes" of the acute form are: "Great chilling of the body, excessive exertion, acute infectious disease, such as measles, influenza, angina, suppression of the menses, lead poisoning." Thomson attributes the blindness in his case to alcohol, made, he thinks, more toxic by the impurities it contained. He says: "First, from the profound poisoning the patient was subjected to, we have an acute interstitial retrobulbar neuritis, or effusion into the sheath of the nerve, affecting, as alcohol always does, the papillo-macular bundles of fibers." With the free ingestion of alcohol, pure or impure, immediately before the attack, such reasoning is natural, and I am far from saying incorrect. But this explanation cannot be accepted without question. It is opposed both to what we know of the etiology of *acute* retrobulbar neuritis, and of alcohol amblyopia. Speaking of the former, Noyes says: "In considering the lesions of the various portions of the nerve we have two groups of cases, one inflammatory, and one toxic. The former may be chronic, subacute, or acute. The latter is always chronic, and is due in the great majority to alcohol or tobacco or both." Of the effects of *acute* alcoholism upon the eye, de Schweinitz says: (Toxic Amblyopias.)

"In so far as the visual effects are concerned, the acute cases may be dismissed with comparatively short notice, inasmuch as, except in rare instances, the visual phenomena are of temporary character, and amblyopia, if it occurs at all, is exceedingly uncommon. The ocular symptoms consist chiefly in paresis of one or other of the external ocular muscles, occasionally permanent in its results, owing to lesions in the nuclear centers and an inhibition of the iris movements secondary to the deep

narcosis, caused by the direct action of the drug upon the brain cortex. Now and then acute alcoholism seems to have been responsible for almost complete blindness without ophthalmoscopic change, rapidly disappearing under antiphlogistic treatment and total abstinence."

Again, Wood says: "It is well established that long-continued and frequent indulgence in small quantities of spirits is more deleterious to eyesight than occasional spree." It was in victims of *chronic* alcoholism that Uhthoff found 17.8 per cent. with amblyopia or some pathological condition of the nerve and retina. (Casey A. Wood, Toxic Amblyopia.) Three of my cases went on to total atrophy. Wood (*loc. cit.*) thinks it is at least questionable if the toxic agents can produce atrophy of the nerve. He thinks it highly probable that an atrophy of the nerve, following a toxic central amblyopia, is an association, and not a later stage of the former.

The authors quoted are confirmed by others, and it is unnecessary to prolong the paper with quotations. While blindness, such as seen in the cases here narrated, cannot be said NOT to follow acute alcoholism, such an occurrence is doubtful. de Schweinitz quotes Mengin, in turn quoted by Knies, as authority for the statement that blindness may follow the use of *methyl* alcohol. I recently heard of such a case, said to have occurred on the relief ship "Solace" during the late war with Spain. It cannot be stated that methyl alcohol was *not* used, and in only one case (4) am I sure that the ginger was made by a reputable firm and probably free from impurities. Both de Schweinitz and Knies mention Knapp's case of detachment of retina following the drinking of a glass of whiskey by a myope. But with all allowance, it must be admitted that visual disturbance from *acute* alcoholism is far from general recognition. Not only so, but the extent of *primary* reduction in vision, narrowing of peripheral fields where some vision was ultimately preserved, position, size and nature of the scotomata, rapid atrophy in three of the cases—all are atypical of alcohol blindness. Again, granting, as is probably the truth, that the macular fibers were first affected, it is unnecessary to assume a TOXIC cause. Noyes speaks of ACUTE retrobulbar neuritis (never, as already quoted from him, the result of *toxic* ingestion) affecting only the central fibers, and causing visual defect at the middle of the field: either a color, scotoma, or absolute scotoma. (Noyes, Diseases of the Eye.) It seems to me, then, that, although alcohol cannot be satisfactorily excluded, nor a thorough explanation given of the cases, leaving alcohol out of account, there are positive obstacles to accepting it as the fundamental cause of the amblyopia.

Has the delay after ingestion of ginger, with the gastric disturbance, special significance? Was the latter only the sick stomach following a debauch; was it a manifestation of an acute disturbance in the eye structures, akin to the nausea of acute glaucoma, or did it mean some putrefactive process, resulting in the formation of toxins capable of producing other disturbances? This question is suggested by the unsatisfactory nature of explanations for the blindness, taken in connection with the paper of Dr. H. B. Young (Jnl. A. M. A., Oct. 1, '98) upon amblyopia from auto-infection. The closest resemblance to these cases I ever met was in the wife of a medical friend, some years ago, ill with puerperal eclampsia and acute albuminuria. She became totally blind, without light perception, and remained so for three days. Pupils were dilated ad maximum. After this time she made complete recovery, and has remained well. The eyes have been normal since. There was no fundus lesion to account for loss of sight. The overeating, in which two of the patients indulged, lends, possibly, some weight to this view.

In conclusion, it seems that the similarity of onset and symptoms points to one and the same cause: that the lesion was an acute retrobulbar neuritis; that a *toxic* origin of this neuritis is most probable, though such a cause of ACUTE neuritis, with permanent atrophy, is not generally recognized. What this toxic agent was, it is impossible to say; but an alcoholic essence of Jamaica ginger, known in at least one case to be free from adulteration, is the most probable. Whether toxic effect was direct or indirect is also unknown. There are difficulties in the way of accepting alcohol as the toxic agent.

The following clipping is from the *Baltimore Sun* of November 16th. It shows that Jamaica ginger is recognized in "dry" places as harmful. I wrote recently to a physician in Oxford asking particulars, but have had no reply.

"There were two deaths in Oxford last week caused by drinking Jamaica ginger, used as a substitute for whiskey in dry places. The first to die was one Terry, a peripatetic individual, who spent most of his time in Oxford. It is said he has a wife and children, but their residence is unknown. John Cousins, a permanent resident of Oxford, was the other victim of this pernicious habit."

Also, in the *Baltimore Evening News* of December 13th there is copied from the *Cambridge Democrat and News* the announcement of seven deaths at a small town, Crisfield, from Jamaica ginger; also the statement that in Dorchester County, where Cambridge is situated, the Courts have included the sale and use of ginger as a beverage as con-

trary to the law, with the effects of "banishing this dangerous and deadly drink," and putting a stop "almost entirely to drunkenness and rowdism." At Cambridge it may be possible to get information concerning eye disturbances, if they occurred. I shall inquire and report if I learn anything.

842 Park Avenue.

## THE NOMENCLATURE OF THE OCULAR MOVEMENTS.

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There is still considerable confusion with regard to the precise meaning that should be attached to the terms used in describing the muscular states of the eyes. Thus, to take one instance, the term abduction is used to signify (*a*) the actual power of movement of either eye outward (in performing associated parallel movements); and (*b*) the amount by which the two eyes can be made to diverge from each other in overcoming prisms, held before them, base in. A similar confusion exists with regard to the term adduction, this being used to denote both convergence (as evidenced by the ability to overcome prisms, base out) and also the capacity displayed by one eye for moving inward when the other is moving outward.

Now confusion in nomenclature often means confusion of ideas. Consequently it leads to erroneous deductions. For example, one author argues that because abduction (in the second sense) is but a small fraction of adduction (in the sense of convergence), therefore the external recti are four or five times as weak as the interni. Again, the former erroneous designation of all cases of exophoria as "insufficiency of the interni" was founded upon by a similar confusion between adduction (in the sense of convergence) and abduction as denoting the inherent power of movement inward lodged in the interni.

In any case, it is better always to use terms that shall be free from ambiguity, and particularly to use different expressions for actions that are essentially distinct in nature. Our nomenclature, therefore, should be such as to clearly differentiate (1) the individual movements of each eye by itself, (2) the associated parallel movements of the two eyes together, and (3) the associated disjunctive movements of the two eyes—three functions which are presided, in all probability, over by a distinct class of nerve-centers, and which are, at all events, affected independently of each other by pathological processes.



The requisite distinctions can be expressed by means of terms that are for the most part already in use. All that is needed is for ophthalmologists generally to agree upon using these terms in a uniform way, attaching to each a single definite meaning, which every one would admit to be the only meaning of the word. The following plan is offered as a suggestion to this effect. It is based upon two principles: To use terms already current, wherever possible; and to do as little violence as can be to existing usage.

### CLASSIFICATION OF OCULAR MOVEMENTS.

#### 1. *Movements of Each Eye Separately.*—DUCTIONS.

*a.* ABDUCTION. Movement of either eye from the middle line toward the temple.

*b.* ADDUCTION. Movement of either eye from the middle line toward the nose.

*c.* SURSUMDUCTION.\* Movement of either eye upward.

*d.* DEORSUMDUCTION.\* Movement of either eye downward.

*e.* As less important, but still useful words (and words, too, that are in use) are LATERIDUCTION, movement of either eye laterally (either out or in); DEXTRODUCTION, movement of either eye to right; LÆVODUCTION, movement of either eye to left.

#### 2. *Associated Parallel Movements of the Two Eyes.*—VERSIONS.

*a.* DEXTROVERSION. Movement of both eyes to the right.

*b.* LÆVOVERSION. Movement of both eyes to the left.

*c.* LATERIVERSION. Movement of both eyes to the same side (either right or left.)

*d.* SURSUMVERSION. Movement of both eyes up.

*e.* DEORSUMVERSION. Movement of both eyes down.

*f.* Compound terms expressive of movement of both eyes up and to right (SURSUM-DEXTROVERSION); up and to left (SURSUM-LÆVOVERSION); down and to right (DEORSUM-DEXTROVERSION), down and to left (DEORSUM-LÆVOVERSION).

#### 3. *Associated Disjunctive Movements of the Two Eyes.*—VERGENCES.

*a.* DIVERGENCE. Separation of the two visual lines in a horizontal plane.

*b.* CONVERGENCE. Approximation of the two visual lines.

*c.* SURSUMVERGENCE.† Separation of the two visual lines in a vertical plane. Called right or left according as the right or left visual line stands higher.

\*Maddox, who has done so much for the systematic studies of muscular anomalies, proposes *superduction* and *subduction*. These are shorter, but are less correct etymologically speaking. *Sub* means not only "beneath," but also "from below," and *subducere*, in particular, means "to draw up" as well as "to draw down." So also *superducere* means "to draw upon" (or "over") rather than "to draw up."

†Formerly called *sursumduction*.

4. *Movements of Rotation of the Vertical Meridian of the Cornea.*  
TORSIONS.\*

a. INTORSION.† Rotation of the vertical meridian so that the upper end points inward.

b. EXTORSION.† Rotation of the vertical meridian so that its upper end points outward.

c. DISTORSION. Divergence of the upper ends of the two vertical meridians.

d. CONTORSION. Convergence of the upper ends of the two vertical meridians.

e. LATERITORSION, rotation of both vertical meridians to one side, *i. e.*, either to the right (DEXTROTORSION) or to the left (LÆVOTORSION).‡

Corresponding to these nouns denoting actions, would be naturally formed a series of derived nouns denoting the muscles performing the actions; for example, *abductor*, *dextroverter* (muscle turning eye to right), *intortor* (muscle rotating vertical meridian inward), etc.; and a series of verbs, such as *abduct*, *converge*, *sursumvert* (=to turn both eyes up), *intort* (Maddox), *extort* (Maddox), etc.

Some sentences illustrating the use of these terms and showing their convenience are appended:

The functions of the superior oblique are *deorsumduction*, *abduction* and *intorsion*.

Cerebral hemorrhage may produce spasm or paralysis of *lateriversion* (either of *dextroversion* or *lævoversion*) and occasionally of *sursumversion* and *deorsumversion*. In rare cases we may also have paralysis of *convergence* or of *divergence*, while the *abduction* and *adduction* are unimpaired.

In paralysis of the superior rectus we have *extorsion* of the paralyzed eye, while the sound eye remains *untorted*. These cases, therefore, are marked by *distorsion*.

In looking up and to the right (*sursum-dextroversion*) the right eye is *extorted*, the left *intorted*, and to an equal degree; *i. e.*, there is a state of *dextrotorsion*.

The *dextroverters* are the right externus and the left internus.

Whatever may be thought of the propriety of the special terms here

\* In spite of theoretical objections against this term, its increasing use and the fact that there is no other equally serviceable expression available are strong arguments in its favor. The "wheel-rotation" (Raddrehung) and "rolling" (Rollung) of the Germans are neither as convenient nor actually as expressive as "torsion," which, moreover, admits of the formation of convenient compounds and derivatives.

† Maddox.

‡ It would doubtless be convenient to have some term other than torsion to denote associated parallel rotation-movements of the two vertical meridians; the term "torsion" being reserved for rotation movements taking place in either eye separately. Compare above "ductions" and "versions." But to do this would needlessly enlarge the terminology already pretty extensive.

advocated, the convenience of having some terms of the sort to use in place of a long periphrase, and the advantage of having such terms used by all ophthalmologists with the same meaning must be obvious to anyone who either writes or reads much about the eye-muscles and their anomalies.

## TWO CASES, WITH OCULAR SYMPTOMS OF HYSTERIA, AND THEIR TREATMENT.

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I read with a great deal of interest an article by Dr. Casey A. Wood, of Chicago, "on the methods employed in examining the eyes for the detection of hysteria," in the *Journal of the American Medical Association*, of November 12th, 1898, and at once decided to report two very interesting cases of hysteria, with ocular symptoms, which seemed to confirm my diagnosis after treating them successfully, and also confirm some of Dr. Wood's symptoms, which he says predominate in such cases. One was a case of hysterical hyperæsthesia of the retina, combined with neurasthenia, and the other, a case of hysterical amblyopia. I can best give the treatment of these cases by relating their history and management while they were under my care. Mrs. G——, aged 36, sent for me on May 11th, 1898, to come to see her at her residence, stating that she was afraid she would become blind, and that she was in great mental distress. On account of her neurasthenic condition, as well as the great anxiety of mind, superinduced by the thoughts of perhaps becoming blind, seemed to prostrate her apparently beyond recovery. Upon entering her bedroom, which was very dark, I noticed that even the window-blinds were closed, so that not a ray of light could enter the room. I asked for a light to examine my patient, which was forbidden me, but after assuring her that it would not make her eyes any worse, she finally consented. I found my patient sitting in bed with a pair of dark glasses on, in a very dark room, and her eyes closed as tight as she could close them. There seemed to be considerable spasm of the orbicularis muscle of both eyelids. She was in a state of perspiration, emaciated, pulse 120, and very despondent. She has had nervous dyspepsia for several years, and has been under a physician's care constantly. It was with great difficulty that I could get her eyes open far enough to even get a glance at her corneas. The photo-

phobia seemed almost beyond endurance. I decided to follow the suggestive plan of treatment. I first asked her whether she thought that I could do her any good. She said yes, she thought I could, or else she would not have sent for me. I then talked to her awhile and explained how other cases similar to hers had recovered entirely, and after I seemingly had gained her confidence in what I could do, said to her: Do you know, Mrs. G——, that you can open your eyes, and keep them open? You can open the window blinds, the windows, and your eyes will not even pain you. I can look into your eyes with my ophthalmoscope and your eyes will not close suddenly as they formerly did. I commanded her to open her eyes; she did so, and kept them open with all the light in the room I could get in. I examined her ophthalmoscopically, but could find nothing pathological.

She did have some hyperesthesia of the retina, but this soon all passed away, after keeping her eyes open and exposed to the light. My ophthalmoscope and retinoscopy mirror showed some error of refraction, which I afterward corrected. I told her to keep the windows open, and have the room well ventilated, to get up out of bed and sit in a chair, and in a day or two she could go downstairs to her meals. Before I left her, her pulse was less frequent, she seemed cheerful, and seemed amazed at the miracle I had wrought. She was put on a restricted diet for her nervous dyspepsia, and advised to get out as soon as possible into the open air. She soon gained strength, and in three weeks came to my office. She had slight orbicular spasm, a fair appetite, and had gained considerably in weight. I dilated her pupils with homatropine, and found the following error of refraction:

$$R. V. = \frac{1}{4} \frac{5}{0} \text{ sph.} + 0.75 \text{ cyl.} + 0.25 \text{ Ax. } 180 = \frac{1}{4} \frac{5}{0}.$$

$$L. V. = \frac{1}{7} \frac{5}{0} \text{ sph.} + 1.25 = \frac{1}{7} \frac{5}{0}.$$

Previous to the correction of her refraction, she said she could not read without her eyes burning, blurring of type, headache, etc. There seemed to be a great deal of spasm of her accommodation and monocular and binocular diplopia. This was all remedied by the correction of her error of refraction. I did not take her field of vision, and am therefore unable to say how her field of vision was for colors. Macropsia and micropsia were occasional symptoms. She came to see me November 12th, 1898, feeling very well, having gained very materially in weight since her illness last May. The element of fear in some cases of hysteria is so great that it requires careful consideration as to how you can best eliminate it. This case seemed to me to be one in which a firm and decided suggestive plan of treatment at first would do an immense amount of good, fol-

lowed by the correction of her errors of refraction, and the treatment of her general health, and plenty of outdoor exercise. Each case is a study of itself as to the best method of making a mental impression upon your patient. It is very essential to first gain the confidence of your patient. I have them discard dark glasses entirely if possible, and it is remarkable how soon they will be able to go without them. It is needless for me to say that the complication of neurasthenia is generally found in all hysterical cases, and the out-door life, massage, electricity and general tonic treatment advised in such cases does them a great deal of good.

The second case was one of hysterical amblyopia, occurring in a young lady, aged 17. She consulted me October 14, 1893. Her history is the following: On October 12th, 1893, she became suddenly blind (as she described it), in both eyes, but later in the day partially regained her vision in the L. E. The day she consulted me her vision in R. E. equaled counting of fingers only at two feet, and in L. E.  $\frac{1}{4}$  ft. I examined her carefully with the ophthalmoscope, but could find nothing pathological in either eye. She had a great deal of spasm of accommodation, also of the orbicularis, and occasional attacks of monocular and binocular diplopia, which made me suspicious of hysteria. I then tried to frighten her by telling her I was afraid she would get entirely blind, and said: Why, you cannot see anything now, when she seemed to become quite indignant, and said she could see, and that she was not blind. I put the trial frame on her face, and she read with each eye separately,  $\overline{20}$ . I then told her she could see quite well with each eye, which she at first did not want to believe, but I soon convinced her fully of that fact. Under homatropine she showed the following error of refraction:

R. sph. +0.25  $\bigcirc$  cyl. +0.75 Ax.  $90^\circ = \frac{1}{16}$ .

L. sph. +0.25  $\bigcirc$  cyl. +1. Ax.  $90^\circ = \frac{1}{16}$ .

She was very nervous and prostrated, caused by the fear of perhaps being permanently blind. I gave her a tonic in pill form, of iron, quinine and zinc val. In a few weeks she seemed quite well, and has remained so ever since. I discovered in this case, while getting her history, that she was inclined to disbelieve what physicians told her whenever she consulted any professionally, and accordingly I thought she would soon deny that she could not see, when I told her so, but would say the contrary as to what I told her, which she did immediately, thereby enabling me to confirm my opinion in the case. I had to tie her left eye shut to convince her she could see with her R. E., or as she called it, her blind eye. My conclusions as regards the management and treatment of such cases are:

1st. Each case should be examined thoroughly and studied well, so as to be sure you have an hysterical case to deal with.



2d. Every case should be studied well as to the best method of making a mental impression upon your patient, whatever that may be.

3d. A suggestive plan of treatment, taking a firm and decided stand in whatever you command them to do, seems the best method in the majority of cases, always remembering that the element of fear enters largely in all hysterical cases, and must be removed to be successful with your case.

4th. All errors of refraction and muscular insufficiencies should be corrected.

5th. In all neurasthenic cases, an out-door life, massage, electricity and general tonic treatment, seems very necessary.

6th. In most cases you get good results, if you can gain the confidence of your patient, and treat them upon the above-mentioned principles.

32 North 2d Street.

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## A SIMPLE DEVICE FOR COMBINED EXAMINATION OF THE ANTERIOR PORTION OF THE EYEBALL AND RETINOSCOPY.

BY WALTER L. PYLE, M.D.

Assistant Surgeon to Wills Eye Hospital.

PHILADELPHIA.

Illustrated.

To overcome the inconvenience of wheeling a high-power convex lens before the sight-hole of an ordinary ophthalmoscope (which procedure is especially annoying and time-consuming in the Loring, Morton and Gould instruments), I have suggested the following simple device, which has been very satisfactorily manufactured by Messrs. Bonschur & Holmes of Philadelphia. There is nothing particularly original in the adaptation, but it has proved sufficiently useful to me to warrant its public description.

To the back of the case of an ordinary concave retinoscopic mirror is affixed a light, swinging frame containing three apertures and stopped in position on either side by two pins. The central aperture is left open and the other two are occupied by a +S. 16 D. and a +S. 20 D. lens respectively. The sight-hole in the mirror is not cut through the glass, but is simply scraped through the mercurial back of the mirror.

With the central aperture in position, the instrument constitutes an ordinary retinoscope or concave mirror for use in all its indications. By

swinging the +S. 20. D. lens before the sight-hole, the cornea may be satisfactorily examined. The +S. 16 D. lens may be used for examination of the posterior portion of the anterior chamber and the anterior part of the lens.

If desired, an additional lens of 7 to 10 dioptries strength may be inserted in the central aperture for examining vitreous opacities. In



fact, the arrangement of the three swinging apertures may be left entirely to the choice of the operator. If he is ametropic, his correction may be inserted in the central aperture. A plane mirror, for retinoscopy at short range, may be fitted in the same manner. A Presbyope may have his exact correction for one meter inserted in the central aperture.

The illustration represents the attachment on the back of a retinoscope with the central aperture in position.

### FOREIGN BODY IN LENS THIRTY-TWO YEARS.

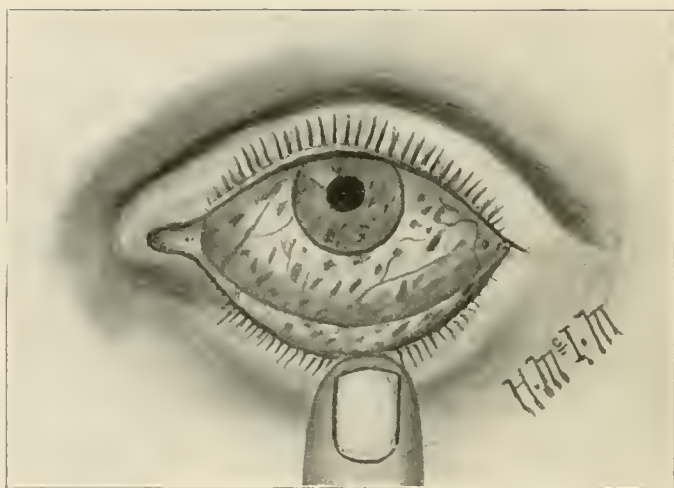
H. P. NOTTAGE, M.D., PROVIDENCE, R. I.

C. S. came to me to have his eyes examined for glasses. I discovered what appeared to be a piece of steel in the lower nasal quadrant of the right lens. The point like the point of a needle was barely visible above the undilated pupil.

After dilatation with cocaine it was seen that the object in question was about one-sixth of the diameter of the lens in length.

Around it, limited to the lower nasal quadrant, only, was a light cloud





of opacity in the shape of a crescent and parallel to the circumference of the lens. This was not visible in the undilated pupil.

The vision was:

$$\frac{6}{38} : \text{with } +1.75 = \frac{6}{18}$$

The patient stated that in 1866 he was struck by a piece of iron. He went immediately to the infirmary at Manchester and had it "removed" at once by a swab. He went back to his work, as a machinist, and experienced no further trouble. He has never had any pain or discomfort whatever. The piece of metal lies against the posterior capsule and shows clearly by front or side illumination.

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## PUNCTATE HEMORRHAGE INTO THE BULBAR AND PALPEBRAL CONJUNCTIVA FOLLOWING THE ADMINISTRATION OF NITROUS OXIDE GAS.

BY H. McI. MORTON, M.S., M.D.,

Oculist and Aurist to the St. Barnabas and Northwestern Hospitals,

MINNEAPOLIS.

Illustrated.

Miss M. K., white, æt 23. Patient of robust constitution and present state of general health perfect.

On this day (May 20th, 1897) she had taken nitrous oxide gas, preliminary to the removal of a tooth. The anæsthetic was borne without any unusual effect noticeable at the time. Upon her arrival home she experienced an itching of her left breast and neck, and noticed that the skin was markedly red. She consulted her family physician, who, observing the punctate hemorrhage of the bulbar conjunctiva as well as upon the left neck and breast, referred her to my office. The appearance was as is shown in the cut (Fig. 1), the bulbar and palpebral conjunctiva being dotted with small hemorrhages.

The right eye was affected, but only by a few hemorrhages, and the right neck and breast very slightly indeed. The fundi presented a normal appearance and the eye and their adnexa—with this exception—were in good condition. The hemorrhages were gradually absorbed, and the eye presented a normal appearance in a few weeks.

The hemorrhages probably resulted from increased capillary pressure and alterations in the blood as well, due to the nitrous oxide gas.

315 New York Life Bldg.



# THE OPHTHALMIC RECORD.

*A MONTHLY REVIEW OF THE PROGRESS OF  
OPHTHALMOLOGY.*

VOLUME VIII.

CHICAGO, FEBRUARY, 1899.

No. 2. NEW SERIES

## EDITORIALS.

### CONCERNING CERTAIN CONJUNCTIVAL AND CORNEAL DISEASES FROM THE BACTERIOLOGICAL STANDPOINT.

Although the study of the relationship of bacteria to certain conjunctival and corneal diseases has not yet advanced sufficiently to justify the omission of clinical designations, none the less, largely owing to the labors of Gifford and Weeks in this country and to those of Uhthoff, Axenfeld, Morax, Beach, Coppez, Bach and many others abroad, we may speak of Koch-Weeks'-bacillus-conjunctivitis, pneumococcus-conjunctivitis, Loeffler-bacillus-conjunctivitis, streptococcus-diphtheria of the conjunctiva, diplobacillus-conjunctivitis, pneumococcus-ulcer of the cornea, streptococcus-ulcer of the cornea, etc., and (with certain limitations and exceptions) mean the diseases usually labelled acute epidemic or contagious conjunctivitis, acute catarrhal conjunctivitis, membranous conjunctivitis, sub-acute or chronic conjunctivitis, serpiginous ulcer of the cornea, etc.

Among the limitations and exceptions may be mentioned, for example, our inability to anticipate with certainty which bacterium will be found in the secretion of two cases of acute conjunctivitis, presenting in general terms the character of "contagious" or "epidemic," the Weeks'-bacillus or the pneumococcus; or, in other words, the clinical distinction between Koch-Weeks'-bacillus-conjunctivitis and certain types of pneumococcus-conjunctivitis is at times difficult, if not impossible. Again the same bacterium may vary in its effect on the conjunctiva; for instance, the Loeffler-bacillus may produce in one eye a destructive (necrotic) diphtheria of the conjunctiva, in another a non-destructive (non-necrotic)

So

inflammation, and in a third a conjunctivitis in all particulars resembling the ordinary catarrhal variety of this disease. Although the large majority of serpent ulcers (hypopyon-keratitis) appear to be due to pneumococcus-infection, the pneumococcus does not always produce a serpiginous ulcer, which may be due also to streptococci or to mixed infection; more rarely to other bacteria or to a fungus, the *aspergillus fumigatus*.

The exact reasons for these phenomena are not entirely clear; evidently they are connected with varying degrees of virulency of the microorganisms, local conditions in the soil, that is in the conjunctiva or cornea, on which the bacterium falls, and individual susceptibility. Thus, pneumococcus-conjunctivitis, especially of mild type, is common in children and was once supposed to be peculiar to them, but the pneumococcus-ulcer in the sense of a true serpiginous ulcer of the cornea is a great rarity in them. Again, as the writer knows from numerous experiments which agree with the experiences of others, it is practically impossible to produce a real pneumococcus-(serpiginous) ulcer of the cornea in rabbits, although their conjunctivæ are quite susceptible to pneumococcal infection. Perhaps these exceptions and limitations will in part disappear when we learn to be more accurate in associating certain clinical signs with certain types of infection. Thus, in spite of the fact that many cases of pneumococcus-conjunctivitis and Koch-Weeks'-bacillus-conjunctivitis appear to be very similar, it is probable that typical examples of each class may be differentiated by a clinical study of the secretion (Gasperini), and, at all events, the contention of Weeks that acute contagious conjunctivitis (Weeks-bacillus-conjunctivitis) should be regarded not as a variety of acute conjunctivitis, but as a separate disease, is reasonable. So, too, the objective symptoms of purulent ulcers of the cornea are interesting in connection with their bacteriological contents. For example, the true pneumococcus-ulcer, that is the typical serpiginous ulcer, is, as the name implies, a creeping lesion, at first advancing by means of an undermined arc of propagation, while the streptococcus-ulcer is more apt to cause rapid destruction of the corneal tissue in its immediate neighborhood and early perforation.

Recently the writer and Dr. C. A. Veasey presented to the Ophthalmic Section of the College of Physicians of Philadelphia the results of a number of bacteriological examinations of the discharge from cases of conjunctivitis and corneal ulcers and some experiments on rabbits' eyes. In general terms their findings corresponded with those of other observers, viz: in acute conjunctivitis having the general characteristics of the contagious type, the Koch-Weeks'-bacillus or the pneumococcus; in mild

catarrhal conjunctivitis staphylococci; in purulent conjunctivitis usually gonococci; in membranous conjunctivitis (non-recurring forms) Klebs-Loeffler-bacilli or streptococci; in subacute conjunctivitis diplobacilli, and in some cases streptococci; and in sloughing corneal ulcers either streptococci or pneumococci. They urged the importance of these examinations not only because they are aids in diagnosis and prognosis, but also because to a certain extent they influence therapeutics.

Thus, in a certain number of cases of membranous conjunctivitis, especially those which have followed a febrile manifestation like measles, the active organism may be the streptococcus and not the Loeffler-bacillus, and, as has been pointed out by Morax and others, this form of conjunctivitis, sometimes known as "streptococcus-diphtheria of the conjunctiva," furnishes a very unfavorable prognosis. In membranous conjunctivitis, due to the Loeffler-bacillus, the corneal involvement may be entirely out of proportion to the conjunctival lesion, as has been admirably demonstrated by Myles Standish, and, as Weeks has shown, cases of membranous conjunctivitis are often clinically very similar, there being no good means of differentiating them except by bacteriological examination. The importance of these observations may be realized when we remember that in true Loeffler-bacillus-conjunctivitis (diphtheritic conjunctivitis) antitoxin is the remedy par excellence; but it is apparently of indifferent value in the membranous conjunctivitis due to streptococci, which, according to some observations made by Veasey, seems to yield better to a collyrium of chlorate of potassium than to other local remedies. The facility with which subacute conjunctivitis, due to diplobacilli, is cured by sulphate of zinc is well known, thanks to the observations by Gifford, Morax and others. If the scrapings of a corneal ulcer show pneumococci or streptococci, that ulcer is liable to spread and vigorous measures should be used to check it, and there is no difficulty with fluorescein, or, as pointed out by Veasey, with toluidin-blue, in outlining exactly the area which should be destroyed. To be sure, most of us now treat ulcers by the application of an antiseptic or bactericidal agent, for example, nitrate of silver, tincture of iodine, formol solution, etc., but as Ward Holden suggests, if there is pneumococcus-infection and the colonies are deep, these substances probably do not suffice; therefore, the value of a smear preparation of a scraped ulcer in helping to determine early therapeutic measures in corneal lesions.

It is almost needless in this day to urge the examination of abnormal conjunctival secretion, either in new-born children or in adults, for the purpose of determining the presence or absence of gonococci. But both Dr. A. B. Kibbe and Dr. Herman Knapp have thought it worth

while, in the Archives of Ophthalmology, to make a plea for the more general use of the microscope in ophthalmic diagnosis, and have furnished illustrative cases. To these the following instances may be added: A female child, the mother a primipara and the labor very rapid, developed at the end of the third day slight conjunctivitis in one eye, which on the following day had reached the second. The obstetrician in charge directed a strong solution of bichloride of mercury (1-3000) and dropped into the eye a solution of nitrate of silver, 10 grains to the ounce. The eyes became rapidly worse, and about the fourth day after the appearance of the inflammation the writer saw the case. Repeated bacteriological examinations failed to reveal gonococci. All harsh treatment was immediately discontinued, and with a collyrium of boric acid and salt, cold compresses for forty-eight hours, and a little liquid vaseline introduced into the conjunctival cul-de-sac, the cure was rapid and complete. Now this was a conjunctivitis neonatorum in the sense that it occurred in a new-born child, but by no means of specific origin. It is probable that the source of the irritation in this case which produced the conjunctivitis came from the vaginal mucous membrane, which for a day or two preceding birth had been somewhat irritated, it was supposed in connection with a sharp attack of influenza. Indeed, the birth itself took place twenty-four hours in advance of calculations.

Again, a man about forty appeared with acute conjunctivitis, which developed first in the right eye and a few hours later in the left. The lids were swollen, the conjunctiva slightly chemotic and there was a free secretion of mucopurulent discharge. The patient at the same time had gleet. His trepidation can be imagined, but repeated examinations of the conjunctival discharge failed to reveal gonococci. In other words, a patient suffering from gleet had acquired an acute contagious conjunctivitis of that variety produced by the Koch-Weeks'-bacillus, which at that time was epidemic in the region, and the microscope made the differential diagnosis, which from clinical symptoms alone would have been difficult, especially in view of the fact that the patient was richly entitled to a gonococcal infection. To quote Dr. Knapp, these examinations take but little time, they are an element of assurance in diagnosis, prognosis and treatment, and should not be omitted in any case implying the least responsibility.

G. E. DE SCHWEINITZ.

## REPORTS OF SOCIETIES.

### OPHTHALMOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

CLINICAL EVENING, DEC. 8, 1898.

The meeting was entirely given up to the showing of cases and to the discussion of them.

Mr. Nettleship showed and read the notes of the first case which was one of renal retinitis, of which he had had the opportunity of examining the eyes both before and after death; he was also able to show drawings of the microscopical character of the retina. He considers that the patches seen are due to effusion, which, when it clears up to a certain extent, numerous pigment cells are found which are derived from the pigment cells of the retina by proliferation. Lawford, who examined the specimen, found that the exudation was in the rod and cone layer, and was outside the membrana limitans externa, and being outside the vessels could not be due to hemorrhage.

Mr. Holmes Spicer showed a case of sympathetic ophthalmia, coming on after excision of the eyeball after a wound with a sardine box. A week after the injury the patient was seen and a tag of iris was removed; this was followed by much hemorrhage. Two weeks after the injury the eye was excised without being wounded during the operation. Fourteen days later the eye became infected and the vision became diminished. The patient was readmitted, although there were no signs of either K. P. or of iritis T-2 V  $\frac{6}{36}$ . He was treated with compresses, atropine and mercury, and although there was much exudation into the vitreous, yet the vision rapidly improved to  $\frac{6}{6}$ .

Mr. Adams Frost had seen a case of sympathetic ophthalmia occurring after Mules' operation, but this case also recovered.

Mr. Marcus Gunn thought that in these cases a ragged wound was nearly always the cause of the mischief.

Mr. W. J. Cant (Lincoln) showed a case of pulsating exophthalmos occurring after a kick in the head by a horse eight years before. The symptoms were diplopia and a tumor at the outer angle of the orbit,



causing great proptosis and over which a loud bruit could be heard. The treatment consisted of digital compression on the carotid, which was continued for nine weeks for three and a half hours a day. The tumor has disappeared and there is now only slight proptosis remaining. In reply to a question from Mr. Arnold Lawson, Mr. Cant said that the pain caused by the treatment was not great; no opium was used and a great deal of the digital compression was done by the patient himself.

Mr. John Griffin and Dr. Blair showed a case of an unusual form of marginal keratitis, probably a variety of pemphigus. It has a great tendency to run in families and a peculiar kind of eczema is present on the body. The eye condition at times resembles spring catarrh and at times phlyctenular keratitis. The general condition is treated by arsenic and tonics while the eye condition is very intractable.

Mr. Doyne stated that he had shown a case similar to this one, or rather worse, ten years ago. It remained in the same condition for a very long time.

Mr. A. H. Thompson showed a case of tumor of the iris in a patient suffering from tobacco amblyopia. The growth was situated on the lower and outer part of the iris; the superficial area was 3 by 4 mm., the surface was rough and there was some ectropion of the uvea. The growth was probably a sarcoma.

Mr. Hartridge showed a case of early choroiditis, showing great exudation and hemorrhages in both eyes; the condition was remarkably symmetrical in the two eyes. The patient's age was 23. The personal and family history was good and there was no history of syphilis. Both discs were swollen, and there was a large choroidal hemorrhage on the outer side of each, with oedema of the whole central region of the retina, with several small circular patches of exudation in the superficial layers of the choroid.

Mr. Ernest Clarke showed a man aged 53, whose sight had been failing for five years. He had had syphilis and had been a heavy drinker. He had, when seen four years ago, double optic neuritis, and the vision was reduced to fingers at 1 metre. During the last four years optic atrophy had supervened together with atrophy of the epithelial pigment, and of the chorio-capillaris and sclerosis of many of the choroidal vessels, the periphery of the retina showed pigmentation like that of retinitis pigmentosa. There were large vitreous opacities. The vision was reduced to P. L.

Mr. Juler showed a case of myxo-sarcoma of the orbit which contained cysts. The contents of the orbit were removed and the roof of the

orbit was eroded and the dura mater exposed. A recurrence has since taken place. The nature of the tumor was ascertained by microscopic examination.

Dr. Tatham Thompson showed a man aged 18 who had vision of  $\frac{20}{200}$ . The white sclera was seen all over the fundus, there being no choroid except at the macula. There were only a few isolated choroidal vessels.

Mr. W. H. Jessop showed a case of injury to the cornea. A large flap which was turned down from the upper part had become united in excellent position.

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## SAN FRANCISCO SOCIETY OF EYE, EAR, NOSE AND THROAT PHYSICIANS.

MEETING OF DECEMBER 15TH, 1898.

A very interesting case of gumma of the conjunctiva was presented by Dr. A. Barkan.

The patient, a woman of about 25 years, has a large gumma over the right tibia, and numerous large indurated ulcerative skin lesions resembling tuberculo-syphilitic sores. The ocular trouble began three months ago in the right eye, in which there is superficial infiltration of the cornea, and iritis. At the inner edge of the pupil there is thickening and evidence of the remains of gummæ. In the left eye is the same corneal infiltration and also iritis. The bulbar conjunctiva over its lower half is much swollen and oedematous, and at the apex of the swelling, and nearly directly over the limbus, is a large, semi-transparent gumma. Dr. Barkan stated that at first he thought he had to do with congenital lues, as there is no history of acquired syphilis, but of course, the existence of the latter is to be presumed. He had placed the patient upon potass. iodid in 20 grain doses. The gumma appeared to be taking on an ulcerative process rather than resolution. His experience inclined him to believe that there is no advantage to be derived from larger doses of the iodid.

In the discussion, Dr. W. A. Martin mentioned that he had seen several cases of gumma of the sclero-corneal margin in the clinics of Europe, and thought that in Dr. Barkan's case, the gumma probably sprang from that region and from the episcleral tissue.

Dr. Frederick had seen a case similar to those described by Dr. Martin, at Moorfields, the cornea itself being implicated.

Drs. L. C. Deane and Philip M. Jones had seen cases of ocular and other syphilitic conditions in which the 20 grain doses of iodid had no effect, but which had recovered under doses of from 60 to 120 grains.

Dr. Geo. H. Powers presented one of the patients he had exhibited at the last meeting, and who had at that time proptosis and impaired movement of the globe. As possibly explaining the conditions, he called attention to the man's right thumb, the nail of which is absent and replaced by an extensive scar. Twenty years previously there had been a sore at that point, which a competent practitioner in Scotland had pronounced to be a chancre.

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## SECTION ON OPHTHALMOLOGY.

### COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Meeting December 20, 1898. Dr. George C. Harlan, chairman, in the chair.

Dr. Charles A. Oliver detailed the history of a case of unequivocal *Reflex Urticaria Caused by Eye-strain*. The patient was a healthy, active woman, 47 years of age, who up to her forty-first year had constantly suffered from a diffuse, unaccountable nettle-rash. Six years before she was seen by Dr. Oliver, her physician found that a pair of complicated, spherocylindrical bifocal lenses for constant use promptly, and without any suggestion or change in manner of life, prevented the urticarial attacks. A return of the eruption, with visual disturbance, induced her four years later to seek a new cylindrical correction. Antimetropia, heterophoria, astigmatism, and presbyopia being corrected at this time, the cnidotic symptoms passed off, and have remained in abeyance ever since. Subjective and objective experiments of both motor and sensory type were made, both positively and negatively and locally and generally, until it was proven that a true relationship existed between the general vasomotor disturbance and the refractive and muscular anomalies.

Dr. John T. Carpenter, Jr., described a case of *Multiple Rupture at the Posterior Pole, with Associated Traumatic Lesions in the Iris and Lens*, in a boy of 15, the subject of convergent strabismus. Three years before, the right, the fixing eye, was struck by a potato thrown from a distance of fifty feet. The left eye was practically useless from high amblyopia and excessive convergence, and during the interval between the receipt of the injury to the other eye and the present, vision had remained equal to 1/60. In the right he had immediate loss of central vision, partially recovered to 6/24; pupil horizontally oval and widely dilated; paralysis of the sphincter of the upper half of the iris and trembling of the entire membrane; numerous "droplets" distributed in the anterior part of the

lens-cortex and a linear opacity, vitreous shreds; papilla partly concealed by exudation; and finally three large tears in the choroid in the lower temporal and macular regions, partially including the nerve-head. Central vision was impossible. Dr. Carpenter called attention to the following points of interest: The associated lesions of the iris, lens, and fundus; the lack of improvement in vision of the amblyopic eye in three years; the number and character of the fundus lesions.

*Discussion.*—Dr. C. A. Oliver referred to several similar cases of his own and of Mr. Jonathan Hutchinson. In one of the former a man was struck in the eye by a fist. The iris was ruptured, the sphincter split, the lens totally dislocated into the floor of the vitreous chamber, the choroid infiltrated with hemorrhages, the entire fundus hazy, and the disk atrophied.

Dr. H. F. Hansell explained the apparently contradictory history of Dr. Carpenter's case to that reported by Johnson, in which vision in the amblyopic eye had improved to the normal acuity after loss of the fixing eye, by noting that vision of the wounded eye was, in spite of the accident, better than the vision of the amblyopic eye; hence the latter was not used for fixation and the amblyopia remained without change.

Drs. G. E. de Schweinitz and C. A. Veasey presented the results of the *Bacteriological Examination of Forty-six Cases of Conjunctivitis and Corneal Ulcer*. In general terms, in the mild types of conjunctivitis staphylococci were usually found; in the acute varieties, which were usually classified as contagious or epidemic, the pneumococci and the Koch-Weeks bacillus; in the membranous varieties either streptococci or Löffler's bacillus; and in the subacute forms of conjunctivitis, in one case at least, the diplo-bacillus of Morax and Axenfeld. In some cases unidentified bacteria were discovered, and in others the examinations were negative.

In the corneal ulcers of the superficial variety staphylococci and, in one instance, pneumococci were found; in the deep or sloughing ulcers without hypopyon, either streptococci or pneumococci; and in those with hypopyon, in one case a mixed infection (pneumococci and streptococci) and in the other a pure streptococcus infection.

Dr. de Schweinitz also described inoculation experiments on rabbits' eyes with pneumococcus cultures, in which he had failed to produce a typical serpent ulcer. Streptococcus injections and staphylococcus injections also failed to produce typical serpiginous ulcer.

The authors pointed out the value of bacteriological examinations, and gave illustrative cases where these examinations had influenced diag-

nosis, prognosis, and particularly therapeutics. While they realized the importance of bacteriological examination in all cases, they did not think our knowledge was sufficiently great as yet to make a bacteriological classification of the various types of conjunctivitis and ulcerative forms of keratitis to the exclusion of the clinical classification.

In the treatment of the membranous form, streptococcus conjunctivitis, Dr. Veasey relied principally upon frequent copious instillations of chlorate of potassium, gr. x- $\frac{3}{4}$ j, as suggested by Knapp. He was successful in removing the membrane with this remedy after unavailing use of mercury bichlorid., boric acid, formaldehyde, zinc, and other remedies, and considered its bactericidal action better than that of zinc solutions for this variety of conjunctivitis.

Dr. William M. Sweet read a paper on the *Diplo-bacillus of Chronic Catarrhal Conjunctivitis*, and reported the examination of 32 cases of conjunctival and suppurative corneal disease, in 7 of which the germ was found. Six of the patients had low-grade chronic conjunctival congestion, with moderate secretion, and 2 had corneal ulceration. In one case of phlyctenular conjunctivitis a few specimens of the germ were found. The life history of the organism agreed with the studies of its discoverers, Morax and Axenfeld, and with the investigations of Peters and Gifford, while the resistance of the disease to ordinary forms of treatment, and its prompt subsidence under solutions of zinc, were fully verified. In one case silver, tannin, boroglyceride, and boric acid were used as treatment for a period of five weeks, with no abatement of the symptoms. As to the germ having a distinct capsule, Dr. Sweet was disposed to agree with the findings of Gifford, although Morax, Axenfeld and Peters state that no capsule exists.

*Discussion.*—Dr. de Schweinitz was inclined to believe in the existence of a bacillus capsule, although he admitted that it did not stain, and was difficult of demonstration. Dr. Oliver explained the exemption of some individuals and the selection of others on the basis of the difference in the character of the conjunctival sac and its secretions, as a soil adapted to the development in some, and the death in others, of the bacilli.

Dr. W. C. Posey reported his experience with *De Wecker's Capsular Advancement Operation*. He has performed it in 33 cases, comprising exotropias of low degree and exophorias of high degree. The immediate gain was 50 degrees in many instances, but when measured two years later it was found that only 6 degrees of gain remained. Although the operation would seem, therefore, objectively to be of little advantage, subjectively, on the other hand, the results showed that the operation was



justified, as the symptoms produced by the weakness of convergence were always ameliorated. The author found that the operation was without danger, as he had only slight reaction following its employment, nor had he noticed any disfigurement to the eye therefrom, as the fold in the bulbar conjunctiva produced by the operation almost entirely disappeared at the end of a year.

Dr. Charles A. Oliver exhibited an apparatus designed to facilitate the use of Reid's ophthalmometer, which he claims furnishes distinct aid in accurately measuring the axis and degree of corneal astigmatism. The instrument is permanently held in an upright, adjustable contrivance of excellent workmanship and ingenious pattern.

HOWARD F. HANSELL,  
Clerk of Section.

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#### WESTERN OPHTHALMOLOGIC AND OTO-LARYNGOLOGIC ASSOCIATION.

The fourth annual meeting of the Western Ophthalmologic and Oto-Laryngologic Association will be held at New Orleans, February 10th and 11th, 1899, these dates having been selected in order to give the visiting members an opportunity to see New Orleans during the celebrated Mardi Gras Carnival, which takes place February 13 and 14.

Arrangements have been made with the Illinois Central Railroad to transport members of the above association from Chicago to New Orleans and return, going via Memphis and Jackson, Miss., returning via Baton Rouge and Vicksburg to Memphis, making a diverse route from that point. This will be appreciated by visitors to the south, as it enables them to pass many historic points en route south, and the unsurpassed sugar and rice producing district between New Orleans and Baton Rouge, in addition to Vicksburg and other war-famed spots, north bound.

Leaving Chicago at 5.45 p.m., Wednesday, February 8th, Carbondale is reached at about midnight, where members from St. Louis can join, arriving in Memphis in the early morning, where those from Louisville, Cincinnati and the east will arrive at practically the same time, bringing members from many states together while yet nearly 400 miles from the Crescent City, which is reached at 7.45 p.m., only twenty-six hours from Chicago.

An interesting programme has been prepared and a full attendance is expected. The opening address will be delivered by Dr. George T. Stevens, of New York, "Historical Notes Relating to Strabismus and

Other Anomalies of Eye Muscles." The subjects chosen for discussion are: "Treatment of Acute and Chronic Glaucoma," by Drs. Dudley S. Reynolds, Louisville, Ky., John F. Fulton, St. Paul, Minn., and Charles W. Kollock, Charleston, S.C.; "Operative Treatment of High Myopia," by Drs. H. V. Würdemann, Milwaukee, Casey A. Wood, Chicago, and B. E. Fryer, Kansas City.

The officers of the association are: Dr. J. E. Colburn, Chicago, president; Dr. W. Scheppegrell, New Orleans, first vice-president; Dr. Casey A. Wood, Chicago, second vice-president; Dr. H. Gifford, Omaha, third vice-president; Dr. Thos. A. Woodruff, Chicago, secretary; Dr. W. L. Dayton, Lincoln, Neb., treasurer.

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A PHYSICIAN in Germany has made a study of the effect of glazed papers on the eye-sight, as compared with the paper mostly used in the earlier part of the century—of dull gray or blue color, usually, and coarse-grained, so that thick letters had to be used by writers with quill pens or by printers on their slow presses. With the introduction, however, of other fibers in place of rags, paper received a smoother surface, steel pens could be employed and printing paper could travel over quicker printing presses. The introduction of brilliant colors has involved a brightness of reflection contrasting greatly with the mild and soothing impression of former days; in fact, the highly glazed surface now in vogue, and the variety of lights and shades presented, are most trying to the eye. The suggestion is made, therefore, that public inspectors of schools should order the use of sanitary paper for the eyes; that is, such as has no glazed or highly polished surface, the colors to be preferably gray or light blue, but no white, and in no case any brilliant or shiny colors.

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SCHANZ reports the case of a glass-blower, who, while blowing a glass had the gas jet directed against his face by a puff of wind. This caused him to sneeze and violently blow his nose. His eye became displaced forward out of its socket, but was replaced with some force by a fellow workman. The procedure was repeated in the presence of Schanz, who had expressed some incredulity as to the accuracy of the report. A perfect result followed.

## REVIEW.

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CONTRIBUTION TO THE BACTERIOLOGICAL STUDY OF PHLYCTENULAR OPTHALMIA. By Albert Michel, of Bordeaux (*Annales d'Oculistique*, October, 1898).

After giving a historical review of bacteriological investigations in reference to phlyctenular ophthalmia, Michel concludes that at the present moment the question is still obscure. Some regard this disease as due to the staphylococcus exclusively, some to the staphylococcus and pneumococcus together, and many others deny its parasitic origin and only admit the scrofulous and diathetic nature of the phlyctene.

Michel, in the effort to gain more light on this subject, has made bacteriological investigations under the direction of Dr. Lagrange and in the laboratory of experimental medicine of Prof. Ferré, of Bordeaux. He made cultures from human phlyctenes, inoculated the cornea of animals not only with the staphylococcus, but with the other microbes, also, which he met with in the interior of the phlyctenes, and finally made anatomopathological examinations of the lesions thus produced.

### METHODS AND PROCEDURES USED.

1. *Method of collecting the contents of the phlyctenes.* In order to facilitate the task and to obtain the desired tranquillity and immobility, the child was chloroformed when necessary; but oftentimes only local anesthesia by cocaine was employed. Instead of using a platinum wire or a curette, the contents of the phlyctene were secured by means of a simple Pasteur pipette, having as fine a point as possible.

The infant being laid upon the table, and the eye well lighted, the bulbar and palpebral conjunctiva was carefully but thoroughly washed with luke-warm, sterilized water. A piece of moist, sterilized cotton was passed gently over the surface of the eye, especially over the phlyctene, in such a manner as to free the part from superficial germs. The lids were then held open by a sterilized speculum, so as to expose the diseased spot, and the point of a Pasteur pipette, made sterile by heat, was introduced into the interior of the pustule and its contents aspirated.

This little manœuvre is absolutely without danger and with some

precautions and a little practice it is easy to penetrate the phlyctene. The disease is not aggravated by this procedure, but on the contrary is often shortened.

2. *Method of making cultures.* The organisms contained in the interior of the phlyctenes were studied by two methods: 1, the direct method, consisting in examining with the microscope the preparations made directly from the contents of the phlyctenes; 2, the method of making cultures on solid media.

The first method is powerless to bring out the characteristics of the diverse microbic species, but it establishes their presence. The second or culture-method, however, has the great advantages of taking account of living germs only, of isolating them from each other, of distinguishing their species, and of characterizing them by their mode of development on different nutritive media, and their action on animals. It is this method which was adopted, using those nutritive media which are most commonly employed in such researches, viz., gelose, serum, gelatine, potato, and peptonized bouillon, but principally serum and gelose, immediately carrying to them the contents of the phlyctene. The tubes were then immediately placed in the apparatus of Arsonval, where they were submitted to a temperature of 35° (C). In coloring, the method of Gram-Kühne was employed, which, besides its simplicity, possesses the greater advantage of being a good means of classification.

3. *Method of inoculation.* The inoculations on the conjunctiva and cornea were made in rabbits in every case except one, which was in a dog. The technique was varied. In some cases the inoculation was made by depositing the germs on a point of the cornea slightly broken in the continuity of its epithelium by lightly eroding it with a sterilized platinum wire. In other cases, a mechanical inflammation of the conjunctiva and cornea was first produced in the animal, similar to that in a patient, using for this purpose the application to the conjunctiva of very fine, sterilized sand, which was forcibly retained for about twenty-four hours by keeping the lids closed with serre-fines. The animal's eyes were then washed, and by means of a sterilized needle, directed parallel to the surface of the eye, an infinitesimal quantity of pure culture was introduced underneath the corneal epithelium to a depth of one-fourth of a millimeter. The lids were afterward closed again by sterilized serre-fines, these being preferred to sutures, especially as it enabled one easily to determine from time to time the condition of the point of inoculation. In other cases the preliminary inflammation was not produced, but only the second step of the preceding method was executed.

Robust animals were used, but on the day of the inoculations their mode of life was changed by putting a number of them together in a small space, giving them barely sufficient nourishment, and not cleaning their cages. These very bad hygienic conditions were made in order to diminish the resistance of their organisms, and to create a nearer analogy to children afflicted with phlyctenular ophthalmia. No effort was made to produce experimental phlyctenes in man.

RESULTS OF THE CULTURES OF PHLYCTENES.—Out of eighteen cultures of conjunctival or corneal phlyctenes, there was found *staphylococcus pyogenes aureus* ten times, and *staphylococcus pyogenes albus* seven times. The *staphylococcus pyogenes aureus* was found in a state of absolute purity nine times. In the tenth case it was associated with bacilli not taking Gram, colored red, and presenting themselves in the diplobacillary form, that is to say, in the form of two short rods, separated by a very apparent, clear space. It was not rare for several diplobacilli to be seen in contact at their extremities and thus forming small chains. There was not noticed the presence of any capsules.

This bacillus behaved in the various media thus: Serum was liquefied in every case, this liquefaction being very rapid at the end of twenty-four hours. The cultures made on gelose always remained sterile. Bouillon itself presented only an insignificant disturbance, sometimes none, after several days at a temperature of  $35^{\circ}$  (C.).

From these characteristics the author thought it probable that this was the bacillus noticed by Morax in subacute, contagious conjunctivitis, and which was presented equally in the form of diplobacilli, sometimes united so as to form short chains, discolored by Gram, not growing on gelose, but developing well on coagulated serum which it liquefied.

Five times out of seven, the *staphylococcus pyogenes albus* was obtained singly and completely pure. In the sixth case there was a short bacillus, not colored by Gram and presenting, here and there, a change in form. The exact nature of this bacillus was not determined. In the seventh case there was not only the presence of the *staphylococcus albus*, but also well-recognizable sarcines, having the characteristic grouping in cubes, and on culture-media, all the characters of *sarcina lutea*.

Out of the eighteen cases, only one completely failed to yield the *staphylococcus*. In this were colonies of yeast, and a bacillus like that of Loeffler. These experiments, therefore, go to show that the *staphylococcus* is much the more frequent among the micro-organisms met with in the interior of phlyctenes.

RESULTS OF INOCULATION.—The question now arises, are the micro-



organisms found in the interior of phlyctenes susceptible of reproducing phlyctenular ophthalmia? As more than one species were found, experiments were made with all, first by inoculations on the cornea with the cultures of the staphylococci, and afterward with the others.

In eight staphylococcus-inoculations on the cornea of animals, three gave negative results, one was doubtful, and four presented lesions having the clinical aspect of the human corneal phlyctene. In the three negative cases a white, irregular spot was obtained, but not resembling a pustule. In the one which was doubtful, there was an elevated, milky patch. In every case, it was interesting to note the production of an ulcer very analogous to those in children which frequently succeed to corneal phlyctenes that have evolved more quickly.

In the other four cases, true experimental phlyctenes were obtained, having small nodes, more or less elevated, and the size of a millet-seed. Their development was always accompanied by the appearance or increase of the intensity of keratitis. These small phlyctenes had an average duration of ten days. At the end of this time, the cornea generally returned to its normal state. In two cases, however, there was produced, consecutively with the appearance of the phlyctene, an infiltration of the cornea, even with ulceration.

Six cases were inoculated with the undetermined bacillus which was found in one culture, and with the pneumobacillus, the pneumococcus, and the Loeffler bacillus found in the others. In all, except one, the introduction of these various microbes under the conjunctival epithelium procured the development of phlyctenes of the cornea. In the exceptional case, the inoculation of the pneumococcus which was very virulent did not affect the cornea, but became generalized and the animal died in less than forty-eight hours.

A very interesting fact noticed was the recurrence which was produced at the situation of an old phlyctene which, by the pneumobacillus, left a white cicatricial film. This is a phenomenon quite frequently produced in the child, and a striking coincidence between the evolution of the human and the experimental phlyctene.

Other check experiments were made and the experimental phlyctenes were microscopically examined. The conclusions at which Michel arrived were:

1. Phlyctenular ophthalmia is a uniquely parasitic affection. The essential cause is a microbe; the bad state of the organism is only the predisposing cause.
2. The cultures from the contents of the phlyctenes on various cul-

ture-media develop varied microbic agents. The staphylococcus is much the most frequent.

3. The inoculation of the staphylococcus and of the microbes of varied nature, but not of every nature, underneath the corneal epithelium of the rabbit, produces lesions analogous in appearance to the human type of phlyctene.

4. The anatomo-pathological examination of the experimental phlyctene shows that in man the lesion may not be limited to the subepithelial corneal space, but may be accompanied by superficial infiltration of the corneal tissue. The simple infiltration of this superficial part of the cornea may be capable, in man, as in animals, of giving rise to the phlyctene.

5. The phlyctene appears to consist in a lesion of reaction of the organism against the microbes which invade the cornea.

ALVIN A. HUBBELL.

DR. J. J. B. VERMYNE of New Bedford, Mass., the well-known Eye and Ear Surgeon, died last year. He was born in Holland fifty-four years ago, and served in the Dutch navy and in the Franco-Prussian war. He was an ideal professional man, and respected and beloved by all who knew him.

MOTET'S OPERATION FOR PTOSIS.—Ptosis can be corrected by utilizing the synergy between the levator palpebræ and the muscles of the globe. Motet cuts a strip in the rectus superior and pulls it through a button-hole in the tarsal cartilage to suture it to the upper lid.—*Gaz. Med. de Paris, Nov. 12.*

LESSHAFT believes that in the treatment of serpiginous ulcers of the cornea, more attention should be given to the lachrymal passages. The absence of any manifest dacryocystitis is no bar to the infective influence on the cornea of bacteria in the nasal duct. He slits the lower canaliculus and irrigates the duct and conjunctival sac with a 1 in 5,000 bicloride solution. He uses atropine, dusts iodoform on the cornea and anterior canthus, and then applies a moist dressing with protective to the closed lids. He reports most favorable results, and rarely has to employ galvanocautery or Saemisch's section.

## NEWS ITEMS.

*Personals and items of interest should be sent to  
Dr. Frank Allport, 92 State St., Chicago.*

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DR. HERMAN KNAPP has recently been elected Vice President of the New York Academy of Medicine.

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DR. FRANK VAN FLEET and Dr. J. Edward Giles have been elected Surgeons to the Manhattan Eye and Ear Hospital.

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DR. H. M. STARKEY has been appointed Professor of Ophthalmology in the Chicago Eye, Ear, Nose and Throat College.

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DR. GEORGE M. GOULD of Philadelphia has been appointed Consulting Ophthalmologist to the Craig Colony for Epileptics.

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AFTER six years service as a member of the Parliament of Ontario Dr. G. Sterling Ryerson of Toronto, has retired from public life, and has resumed the practice of ophthalmology.

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AT THE annual meeting of the Chicago Ophthalmological Society the following officers were elected: President, Dr. Lyman Ware; Vice-President, Dr. Cassius D. Wescott; Secretary and Treasurer, Dr. C. P. Pinckard.

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AT THE twelfth annual meeting of the Board of Directors of the Washington Hospital for Foundlings, recently held, the medical staff was elected. Among others Dr. D. K. Shute was chosen Ophthalmologist.

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LORD KITCHENER of Khartum has recently consulted a well-known London Ophthalmologist, and we are glad to be able to state that the sinister rumors of threatened blindness which have been widely circulated are totally untrue.

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THE REGULAR November meeting of the San Francisco Society of Eye, Ear, Nose and Throat Surgeons was held November 17th at the office of Dr. George H. Powers. Several interesting papers were read by Drs. Powers, Barkan and others.

DR. G. E. DE SCHWEINITZ has resigned as Professor of Diseases of the Eye in the Philadelphia Policlinic. The chair has been therefore abolished. An Emeritus Chair of Diseases of the Eye was created and Dr. de Schweinitz elected to fill it.

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THE NOVEMBER meeting of the Society of the Washington Ophthalmologists and Otologists was held at the residence of Dr. J. H. Bryan, Dr. Swan M. Burnet, President, in the chair. Dr. Suter read an interesting paper on the "Twisting Power of Cylindric Lenses."

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BOOK-HOLDER FOR SCHOOLS.—The Giessen High School provides each pupil with a simple, cheap, adjustable little book-holder to stand on the desk and hold the book open at the proper angle, made on the principle of a folding photograph case.—*Deutsche Med. Woch.*, Nov. 17.

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DR. JAMES THORINGTON, of Philadelphia, has gotten out a new light screen, which, while useful for general eye, ear, nose and throat work, is especially intended for retinoscopy. It has several points of material improvement over his old screen and may be purchased through Wall & Ochs, of Philadelphia.

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DR. FROMAGET reports an interesting case of a healthy man, aged ninety-two, upon whom he operated successfully and quickly for cataract under a few drops of a 2-per-cent. solution of cocaine. In the second night severe mania occurred, lasting for sixteen days, which he attributed to constipation and retention of urine.

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INFECTED BY ABSORPTION.—An eye quack, who advertises to cure all diseases of the eye by the simple process of "absorption," recently admitted to his house a patient with gonorrheal ophthalmia; and, as it is a poor rule that does not work both ways, and absorption at that time was working freely, many of the other inmates caught the disease. Each sufferer was assured there was nothing the matter, and that it was all in his eye. The true nature of the disease was finally discovered in time to save the sight of the victims, and now the latter are suing the quack in the hope of absorbing some of his dollars as a sort of salve for their sore feelings and sore eyes.—*Chicago Medical Recorder*.

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AT A MEETING of the Cincinnati Academy of Medicine, held November 21st, 1898, Dr. Louis Stricker read a paper on the "General Practitioner and the Optician versus the Oculist," which was discussed by

Drs. Ayers, Tangeman, Vail, Marcus, Drury, De Beck and Christian. Dr. Robert Sattler reported a case of proptosis in which the eyeball had been forced forward by an upper and forward movement of the inferior orbital plate. Osteosarcoma was diagnosed and an operation occurred. Exploration of the maxillary sinus disclosed simple rarefaction. No fluid or tumor was found. The parts were replaced into their normal condition, the wound closed and drainage used. A good result followed.

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THE editor of this department wishes to again make a plea for assistance in compiling items of news for ophthalmologists. These columns might be made much more interesting if every subscriber to the RECORD would take a little personal interest in the matter.

If you know of any ophthalmologist who has perpetrated matrimony, or been compelled to die, received some kind of appointment, or any other thing of kindred nature, which has interested you, and which you might reasonably suppose would interest others, please transmit such items of news to the above address, and you will incur the lasting obligations of the editors of this journal. If you see any item in any of your medical journals of an ophthalmic nature, that is interesting, please clip it out or copy it, and send it.

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A NEW addition to ophthalmological literature is the "Anales de Oftalmologia," published monthly in the City of Mexico in the Spanish language. The editors are Drs. Troncoso of the City of Mexico, Vélez of the City of Mexico, Fernández of Havana, Cuba, and Oliver of Philadelphia, U. S. A. The collaborators are Drs. Lagleyze and Werdicke of Buenos Ayres, Gómez of Bogota, Flores of Lima, Cienfuegos of Santiago, Chili, Guzman of Managua, Nicaragua, Debayle of Leon, Nicaragua, Sattler of Cincinnati, Hale and Casey Wood of Chicago, de Schweinitz of Philadelphia, Bryant of Omaha, Darier of Paris, Antonelli of Paris, Demicheri of Montevideo, Uruguay.

The third number contains twenty-five pages of reading matter, and contains an article by Frank S. Milbury of Brooklyn, New York, on "Insufficiency of the Ocular Muscles with Treatment;" a report of the Ophthalmological Society of the United Kingdom, held June 9th, 1898; a report of the meeting of the Ophthalmological Society of Chicago, held May 10th, 1893, and other interesting matter.

This periodical starts out under good auspices, and there seems to be no reason why it should not succeed. We wish it good luck.



DEFECTIVE SIGHT AND HEARING IN PUBLIC SCHOOL CHILDREN.—The suggestion made by the committee of public health of the medical society of the County of Kings that an examination should be made of the sight and hearing of the children attending the public schools of Brooklyn, has borne abundant and valuable fruit. During 1897-8, 50,000 children were examined with the result of finding that nearly one-third had defective sight, hearing or both. The parents of these children were notified, and the increased attendance upon the dispensaries has been most marked. Unfortunately, these institutions have no funds with which to supply spectacles to the poor, and to meet this want a fund has been established under the fostering care of the Brooklyn Teachers' Association, which has shown its great interest in the movement by contributing \$150 as a nucleus of the fund, and by undertaking to solicit funds from those interested. This fund is to be drawn upon only by requisition from a school principal, endorsed by a physician who must certify to the worthiness of the case. It is estimated that \$5,000 will be needed. Contributions may be sent to Miss Jessie H. Bancroft, treasurer, director of physical training in the Brooklyn public schools, at 131 Livingston street, Brooklyn.—*Brooklyn Medical Journal*.

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SATTLER'S OPERATION FOR MYOPIA.—This operation has been performed on thirty patients up to date, and has proved more than satisfactory; the operative astigmatism is very slight as a rule; the eye heals much more rapidly than with other methods, and without the least inflammation, in nearly every case. He first makes an incision 5 to 7 mm. in length, perpendicular to the vertical meridian and about 1.5 mm. from the edge of the cornea, with a Weber hollow lancet. The anterior capsule is then seized with a sharp hook, and the lens substance loosened at the equator and from the posterior capsule. A Daviel spoon is then pushed a little way into the front chamber, slightly pressing down the upper lip of the wound, while another Daviel spoon is applied to the region of the lower edge of the cornea in a horizontal position, with a moderate pressure backward. By this maneuver the entire nucleus is evacuated and the process is repeated a second or third time, as long as it brings lens substance without difficulty. The iris is then replaced and one drop of atropin instilled. The amount of the lens substance thus evacuated amounts to two-thirds or even three-fourths of the entire lens. In some cases this intervention is sufficient, but usually discission of the posterior capsule is required later. He has recently applied this same operation to nine cases of lamellar cataract with perfect success.—*Klin. Therap. Woch.*

THE INVENTION OF SPECTACLES.—Who first invented spectacles? These aids to vision appear to have come into use about the fourteenth century. The earliest reference to them is in the work of Bernard Gordon, Professor of Montpellier, who speaks of a collyrium devised by him which allowed a person to read without spectacles. In 1360 Guy de Chauliac in his treatise on surgery refers to the use of lenses. The invention of spectacles is sometimes attributed to Roger Bacon, who died in 1294. Further research, however, has shown that in 1285 Savino degli Armati, a Florentine, worked glass into the form of a lens as a help to vision. For him, therefore, may justly be claimed the honor of having invented spectacles. He died at Florence in 1317, and was buried in the Church of Santa Maria Maggiore. On his stone is the following inscription:

Qui Giace  
SAVINO DEGLI ARMATI  
Di Firenze  
Inventore Degli Occhiali  
Dio Gli Perdoni Le Paccati  
Anno DMCCCXVII.

(Here lies Savino degli Armati of Florence, inventor of spectacles. May God forgive him his sins! A.D. 1317.)

A YEAR or two ago an artist from San Francisco who wore a glass eye came to Yokohama and established himself in a little bungalow on the outskirts of the city.

The weather was extremely warm, and before the stranger had become settled he was besieged by a number of coolies who wanted to get the job of fanning him at night. The artist looked over the applicants and finally selected an old man who brought excellent recommendations from his last employer.

When it was time to retire the artist took out his glass eye, laid it on the stand at his bedside, and went to bed. The old man picked up his fan and the San Francisco man was soon asleep. He slept peacefully for an hour or two when he was awakened by a chorus of buzzing insects about his head. He looked about him and found that the man whom he had hired to fan him was gone.

The next morning when he went in search of another coolie he was amazed to discover that no one would work for him. He was looked upon as a wizard and worker of miracles, with whom it was unsafe to be alone. The old man had gone among his friends and told how the

Californian had taken out his eye at night and laid it on a stand in order that he might watch his servant at night and see that he kept his fan in motion. The old coolie's story created such excitement that the San Francisco man was never able to get another Japanese to fan him after that.

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THE FOLLOWING article has appeared as an editorial in one of our exchanges. In view of the fact that a prominent specialist in Denver, Colo., has recently, in print, openly advocated the paying of commissions from specialists to family physicians for patients sent from the latter to the former, the following editorial opinion is interesting:

THE COMMISSION EVIL.

"An evil has lately sprung up which is not specially creditable to those concerned; this is the practice of paying commissions or rebates by specialists to persons bringing them cases. A few years since the medical world was set sneering, by a well-authenticated report that in a certain city the physicians sent out drummers to board incoming trains and by skilful touting to secure business for their respective employers. Fabulous tales were told of the wealth piled up in this way, and when the light was turned on this practice, the Legislature enacted a law that all persons engaged in this business should wear a badge. This put an end to this scandal. There is little difference between these now obsolete methods and those practiced in many of our Northern cities, only that professional men are employed as drummers and the slice of the fee is larger.

"Another variety of this commercialism has reached the hitherto honest practitioner in this country. The plan is this: Dr. A. brings a patient to Specialist B. or General Surgeon C. A. says, 'here is a man abundantly able to pay a good fee, charge him liberally, but I want one-third or one-half.' Should the specialist or the general surgeon refuse to accede to this proposition, the patient is taken elsewhere to some less scrupulous brother.

"The wrong is to the unsuspecting victim; he trusts his family physician to send him to the specialist of his selection to be sure, but he has a moral right to expect that selection to be made on honest judgment and not with regard to the division of a great fee. Nor is this practice fair to the specialist and surgeon, for they get the credit of charging an exorbitant fee, only part of which they actually receive.

"No. Let each practitioner have his regular and proper fee, and if any division must be made, let the patient know exactly whom he is paying."

THE FOLLOWING interesting letter has appeared in a recent number of the *Journal of the American Medical Association*:

## BUYING PATIENTS.

HARTFORD, CONN., Dec. 1, 1898.

TO THE EDITOR:—Recently a physician who has attained some prominence in his neighborhood wrote me asking what I was accustomed to give the family physician who sent his patient to my care. I replied that I never bought practice and never gave anything to physicians who sent me cases. He answered that he always received a fee of \$10 for sending cases who could pay \$20 and more a week. Where the bills amounted to several hundred dollars, most medical men sent him 5 per cent. on all accounts over \$200. From inquiries I found that two gold-cure establishments had received some cases from this physician, and an obscure New York specialist had also received and treated some cases sent by him. Within five years, since the prominence of "gold cures," I have heard of offers of this kind from managers of such places. In all my long experience with the profession, I have never before been approached by a reputable man, and I am confident that a very few medical men would ever stoop to buy or sell patients in this way. The real specialists, who depend on the profession for their cases, feel bound to the medical man to return the case to his care again and renewed confidence of the skill of the family physician. A kind of unwritten law has grown up, in which the specialist assumes the care for a time, and expects to return it to the care of the family physician for further and more protracted treatment. In my experience in the care of alcoholic and opium takers, after a few months' residence in an asylum, the return to the family or general practitioner is a very essential part of the success of every case. The best results come from the general after-cure by the physician outside of the asylum. The case is sent to me by the physician for such care as he cannot give at the time and place. When the acute symptoms subside, and restoration begins, it is often better to go back under the family physician's care. In all this the specialist acts as a consultant and has no claim on the patient, nor is he under any special obligations to the physician who sends the case. The physician is rather under obligations for the favor of special treatment and return of the case to his care again. The idea of buying and selling the privilege of treating the case is repulsive to all sense of honor and professional courtesy. The physician sends his case to the specialist simply because it is the best interest of the case. No other course should receive the least attention. Very truly,

T. D. CROTHERS, M.D.

DR. B. BEHEIM-SCHWARZBACK of London writes from Kimberley to say that during a visit to South Africa he was acting on a suggestion made to him by the late Mr. Ernest Hart. He investigated the power of sight of the natives of the soil. His notes are as follows: I have examined in the Eastern Province chiefly, but also in Kimberley and in some of the towns in the middle province, a total of 1,853 black people—Kaffirs, Basuto negroes, Hottentots, and a few bushmen. I found it impossible for my purpose to separate members of different tribes. In the few instances in which I compared the sight of one with the other, no differences worth mentioning were detected. The so-called native locations and the native schools gave me the most material. Out of 1,853 persons examined, 1,007 were females and 846 males; all were, or seemed to be, under the age of 30. The result was as follows:

1	had power of sight almost.....	20/60
3	had power of sight about .....	20/50
35	had power of sight about.....	20/40
218	had power of sight about.....	20/30
1,509	had power of sight about.....	20/20
50	had power of sight about.....	20/15
28	had power of sight about ... ..	20/10
9	had power of sight about.....	20/5

In other words, out of a total of 1,853 natives, 1,509 possessed a power of sight equal to the normal sight of Europeans. 257 had a stronger and 87 a weaker sight than the normal-sighted Caucasian. The phenomenal strong vision of 20/60 (which means that objects were noted at a distance of 60 feet, which an emmetropic white person could notice at a distance of 20 feet only) was in a Kaffir girl of 14 years of age. The subnormal sight mentioned was due to myopia acquired at school, thus proving that the same detrimental causes which produce short sight in children of the white race have a similar effect on the optic organ of the dark race.

It was most difficult to ascertain in many cases very exactly the power of vision on account of the uncertain and hesitating statements sometimes made. But I have given the correct average measure. The result in toto was somewhat disappointing, inasmuch as the superiority of native eyesight over the European is by no means so general as it is often supposed to be, so far as South Africa is concerned.

With a few exceptions, all the natives tested in regard to their power of vision were also tested in regard to their perception of colors. But not a single case of color blindness or of hesitation in perceiving even slight shades of color could be detected amongst them, which result (having in



mind the negative results of similar tests made among the South Sea Planters, the Maoris of New Zealand, the aborigines of Australia, and the Papuans) seems to point to the probability that color blindness is one of the many Danaic gifts which civilization has bestowed on the Caucasian race.—*British Medical Journal*.

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CARBOLIC ACID IN THE EYE.—Dr. Ray of Louisville reports a medico-legal case of interest, in which a medical friend of his, practicing in central Kentucky, was concerned. Dr. A. was accused of accidentally dropping carbolic acid in the eyes of a new-born infant suffering with ophthalmia naonatorum. He was sued for damages, and Dr. Ray was asked to testify on the witness stand. The circumstances were these: A child suffering with ophthalmia neonatorum had been ordered a solution of nitrate of silver and the nurse in attendance placed the bottle on the mantel, and along beside it she also placed a bottle of carbolic acid which had been used in disinfecting the vessels around the lying-in-chamber. The doctor was unaware of the fact that there was any carbolic acid in the house. He came in one evening about dark to see the child, and it was apparently doing very well in about the second week of a purulent ophthalmia involving both eyes. He had the nurse take the child in her lap near the window, and he walked to the mantel and took up the bottle which was in the place he had been in the habit of finding the bottle of nitrate of silver solution, then took a medicine dropper and drew a few drops of the fluid into it and sat down to cleanse the eyes preparatory to dropping into them the solution. As usually happens, the lids were very much swollen, and in getting them open they became everted, so it was difficult for him to expose the cornea. With the lids everted in this way he dropped a drop of carbolic acid upon the exposed conjunctiva. He stated on the witness-stand, however, that he was unable to see the cornea, and that the carbolic acid only came in contact with the under surface of the lid. It ran down the side of the face over the lid and produced a little white discoloration characteristic of carbolic acid burning, and he immediately thought something was wrong. The child cried very hard, and he asked the nurse what the liquid was. She said it was the medicine he had placed upon the mantel. He went again to the mantel and found the bottle of nitrate of silver solution there untouched, and also found that he had used carbolic acid instead. He immediately washed the eye as thoroughly as possible and applied some vaselin. The child recovered with a large central leucoma, and the doctor was sued for \$5,000 damages. Asked if he ever used carbolic acid about the eyes, Dr. Ray told them he

did. Asked if he ever used chemically pure carbolic acid, he replied that he had done so a number of times; that he frequently applied pure carbolic acid to corneal ulcerations with a probe wrapped with absorbent cotton. Asked what he thought would be the effect of carbolic acid upon the cornea, he stated that it would be superficial; that the effect of pure carbolic acid to the healthy cornea would be to simply erode the epithelium. The doctor was mulcted for \$350. Dr. Ray does not believe that pure carbolic acid will produce a perforation of the cornea; it will destroy the epithelial layer, but that will be all. But in an eye of ophthalmia neonatorum, the disease itself, in connection with the erosive effect of carbolic acid, might result in perforation of the cornea. It is well known to all that under the most approved methods of treatment a great many eyes are lost from ophthalmia neonatorum.—*American Practitioner, October 15th.*

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We quote verbatim an article which has recently appeared in the editorial columns of the London *Lancet*:

"Our contemporary, the *Optician*, gives in this week's issue the questions set by the examiners of the above bodies for their optical examinations. The examination of the Spectacle Makers' Company is the first of them and is divided into two parts—a *viva voce* and a written, the latter occupying two hours and a quarter. It is stated that ninety-three candidates presented themselves, and that among these were a large number of old members of the industry, the provinces being well represented by candidates from Leeds, Tunbridge Wells, Deal, Tenby, Carlisle, Kilmarnock, and other places. The questions seem to have been carefully thought out, and if anything like satisfactory replies were obtained the standard of knowledge in the possession of the opticians is very high, and it is clear that those who pass the examination will not only be thoroughly grounded in their subject, but will be very competent judges of the prescriptions sent to them by ophthalmic surgeons. As it is certain that a large proportion of the public do, and will always continue to, apply to the optician for incipient failure of vision, it is obvious that the glasses selected by the optician should be given with judgment and a sound knowledge of the principles of optics. At the same time the opticians should remember the motto, "*Ne sutor ultra crepidam*," and take care when unusual or suspicious phenomena are observed to recommend the patient to obtain the advice of a surgeon. We append a few of the questions set at the former of these examinations. 1. How would you determine the focal length of a simple biconvex lens with faces of equal curvature? Give all

the practical methods you know of. 2. In what way is the position of the principal focus of a lens dependent upon the choice of the curvatures? Illustrate your answer by reference to the positions of the front and back foci of a plano-convex lens of  $+20$  D. Does it matter which surface you turn toward the source of light as regards definition? 3. A prescription is given you as follows:  $-3$  D. C. axis horizontal  $\ominus +1.5$  D. C. axis vertical right and left. State the different methods of working such a lens and give reasons for your choice of curves. 4. A boy, aged 10 years, has vision  $= 10/40$  and with  $-2.5$  D. S. he sees  $20/30$ , but on testing his P. P. is found to be 12 cm. What is probably his defect, and give your reason? The British Optical Association's examination has also been held this month and twelve candidates presented themselves, out of whom only one failed to pass. This examination occupies about two and a half hours and is divided into three parts—optic, dioptric, and ophthalmometric. Among the questions were the following: 1. Show how images formed by concave lenses are always vertical, erect, and diminished. 2. Transpose the following lenses into other combinations: (a)  $1.73$  cyl. axis  $45^\circ \ominus +3.25$  cyl. axis  $135^\circ$ ; (b)  $+3.00$  sph.  $\ominus -1.5$  cyl. axis  $105^\circ$ ; (c)  $+1.25$  sph.  $\ominus +2.75$  cyl. axis  $90^\circ$ . 3. In dislocation of the crystalline lens, the periphery of the lens being located, say, in the middle of the pupil: how would you prescribe lenses to assist the refraction for distance? These are sufficiently reasonable questions, and no exception can be taken to them from a professional point of view. We must add, however, that in the ophthalmometric part of the examination of this association some of the questions trench on purely medical subjects and imply that the young optician has gone somewhat beyond his *métier*—for example: Question 3 is, How would you diagnose tobacco amaurosis? Question 4 is, How would you measure scotoma? Question 7 is, What are the indications that would lead you to suspect incipient glaucoma? If the candidate be expected to diagnose tobacco amaurosis, why should he not know the retinal changes in Bright's disease and diagnose the nature and position of an intracranial lesion from the observed defects in the field of vision? Surely, all this is quite outside the optician's work."

THE next number of *The Lancet* contained the following letter:  
*To the Editors of The Lancet:*

SIRS—You make a comment in *The Lancet* of November 19th on the above in a tone of modified approval. If one may judge from the advertisements in the newspapers this association exists chiefly to furnish material for advertisements by its members. The prescribing chemist

may be objectionable, but he does not generally do actual harm, whereas the consulting optician (or eye-sight specialist) often causes harm and pain to young people who may consult him. My experience is that an ammetropic or slightly hypermetropic young person in his teens, doing some extra work and having a certain amount of spasm induced, is frequently by these advertisements lured to the "eyesight testing-rooms," where probably a couple of pairs of slightly differing low concave spherocylindrical spectacles are supplied, and then for a time the patient sees well, but ultimately in a few weeks worse spasm is induced and more pain.

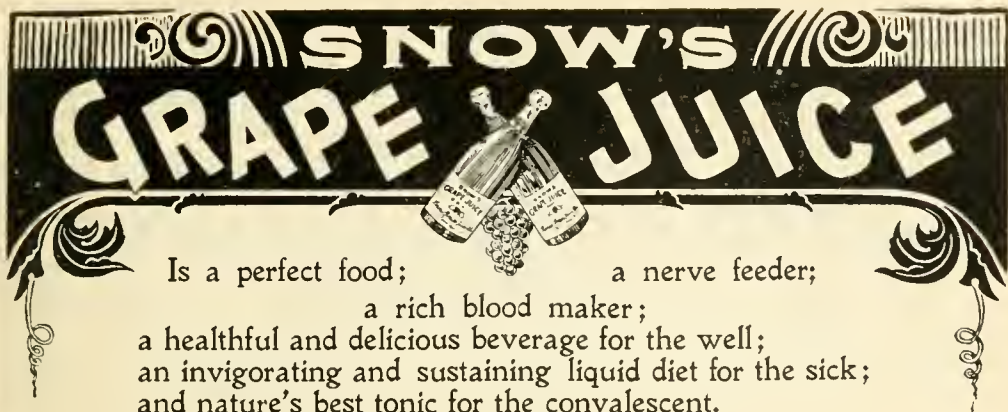
The proportion of girls with defective visual acuity is greater than it is in boys at every age of school life; in them this spasm is exceedingly common, and it is girls who most frequently suffer from the wrong glasses of the optician. The method, so far as I have been able to make it out as advertised, "Sight testing for the general practitioner," is on a level with that of the "honorable company" of spectacle sellers, being one which neglects spasm of the eye, and is on that ground to be condemned as likely to be unreliable if used to prescribe spectacles for young people. We now have our Board school children tested as to visual acuity, and errors of refraction become obvious as soon as young people go to work, so that glasses are becoming more necessary every day at earlier ages. The correction of the causes of the pain and inconveniences from refractive error is part of a medical man's work and should not be allowed to pass into the hands of those who seem to be organizing themselves into a vested interest, whilst at the same time their methods for the reasons given above are daily becoming unsuitable and actually harmful to increasing numbers of their patients. I am, sirs, yours faithfully,

JAMES KERR,

Honorary Surgeon to the Bradford Eye and Ear Hospital, Bradford,  
November 22d, 1898.

\* \* \* We think the association will find our approval very modified.—  
*Editor L.*

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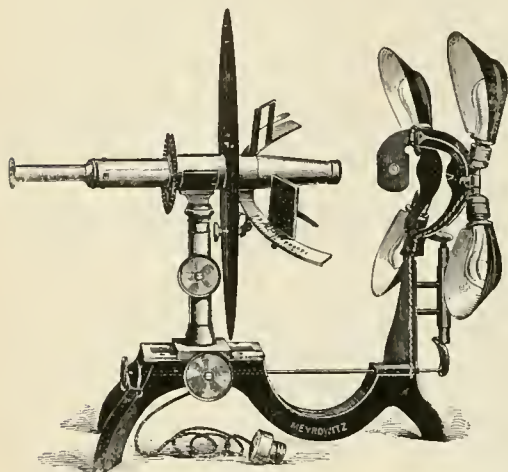
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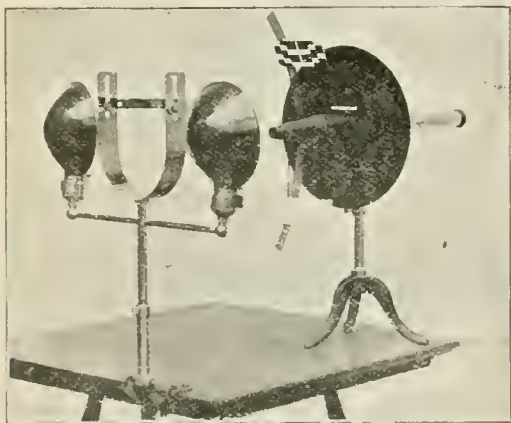
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